

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

SOUTHERN COTTON MILLS.



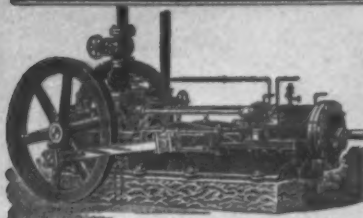
A full list, with name, location, the number of spindles and looms, is given in this issue, together with much other matter on cotton manufacturing.

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VOL. XXV.
No. 6.

Baltimore, March 9, 1894.



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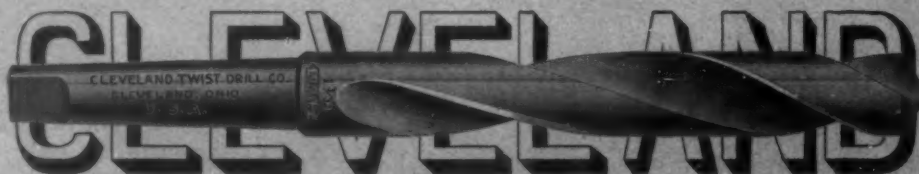
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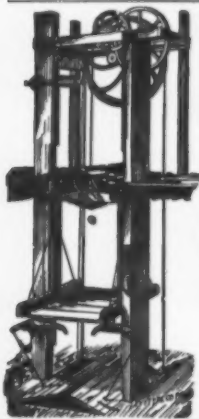
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No. 50 N. Twentythird Street,

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J. H. & D. Lake Co., Massillon, Ohio.
GENTLEMEN—We purchased from you last March (1893) four of your two-inch Patent Screw Lever and Multiband Friction Clutch Pulleys for a very particular and severe place, as they were to run at a very high rate of speed. We were somewhat skeptical at first as to what they would do on so high a speed, as they were to reverse constantly. We are thoroughly satisfied with them and they have been in constant use ever since and have greatly surpassed our expectations and would be pleased to recommend them to anyone whom you may refer to us.

HUNTER MFG. CO.
J. E. Langdon, Manager.

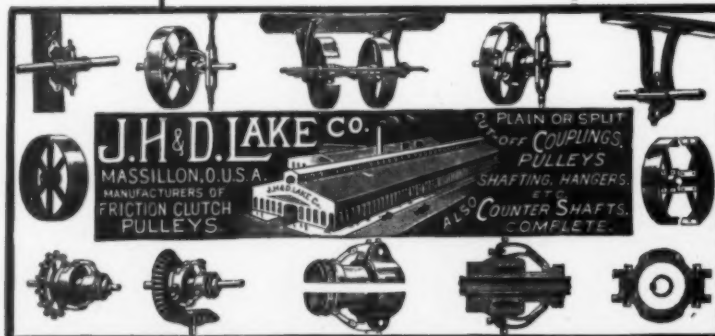
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MILLWRIGHTS, MACHINISTS AND MILL FURNISHERS

LOUISVILLE, KY., Dec. 13, 1893.

J. H. & D. Lake Co., Massillon, Ohio.
GENTLEMEN—It will, no doubt, be of interest to you to learn that your Patent Screw Lever and also your Multiband Friction Clutch Pulleys and cut-off couplings which we have placed are giving entire satisfaction. Out of the twenty-eight or thirty which we already have in use in different factories, we have yet to record one instance wherein there has been any complaint made. We have, in the last ten years, used and placed one or more of nearly all makes of Friction Clutches, and we are satisfied that these are the best Friction Clutches now in existence.

W. E. CALDWELL CO.
Miller.

The Verdict of
Popular Opinion
is Centering on
J. H. & D. LAKE CO.



Who Make the
Best **CLUTCHES**
and **PULLEYS**
in the World.

THE CORRESPONDENT SHOW PRINTING CO.

PIQUA, OHIO, December 16, 1893.

J. H. & D. Lake Co., Massillon, Ohio.

GENTLEMEN—Replying to your favor of 15th instant, we take pleasure in saying the two Friction Clutch Pulleys and the Cut-off Coupling which we bought of you over a year ago are giving us excellent satisfaction. The thirty-six-inch Friction Clutch drives our freight elevator, 2500 lbs. capacity, with perfect ease, while the Cut-off operates two four-horse-power machines nicely. We are well pleased with the Pulleys and shall have more of them shortly.

THE CORRESPONDENT SHOW PRINTING CO.
J. B. Hemsteger,
Pres. & Gen. Man.

THE HENDEY MACHINE CO.
MACHINISTS' TOOLS.

TORRINGTON CONN., Dec. 13th, 1893.

J. H. & D. Lake Co., Massillon, Ohio.

GENTLEMEN—In reply to yours of 13th, we would say. We have been using your clutches for the past two years, and we find them very satisfactory. They have never caused us the least trouble.

THE HENDEY MACHINE CO.
H. J. Hendey, Pres.

THE BROWN HOISTING & CONVEYING MACHINE CO.

CLEVELAND, OHIO, December 9, 1893.

J. H. & D. Lake Co., Massillon, Ohio.

GENTLEMEN—Your favor of the 18th instant is at hand. We have none of your Clutches in operation, but we bought them and sold them to other parties and have had no report of them, so suppose that they have always been satisfactory.

THE BROWN HOISTING & CONVEYING MACHINE CO.
By E. T. Scovill, Secretary.

Do You Know A Good Thing When You See It?

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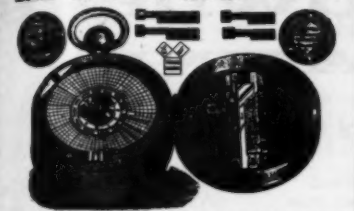
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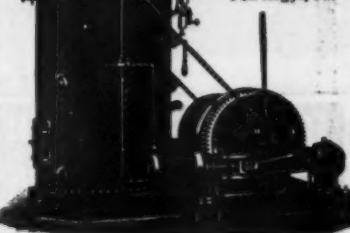
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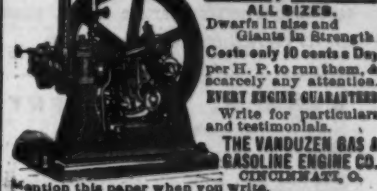
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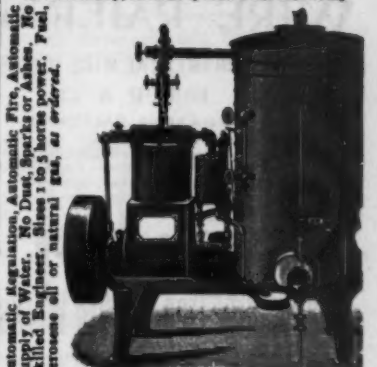
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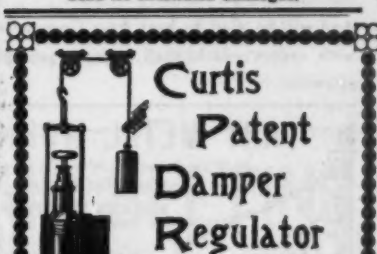
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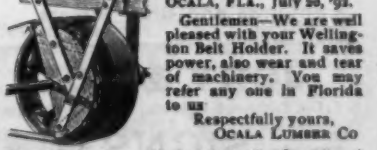


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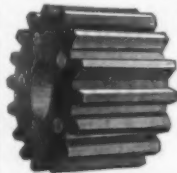
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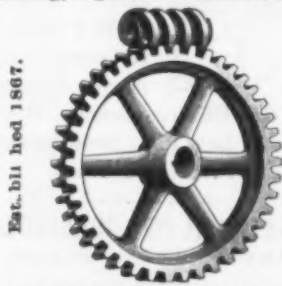
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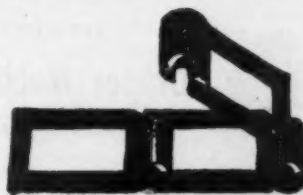
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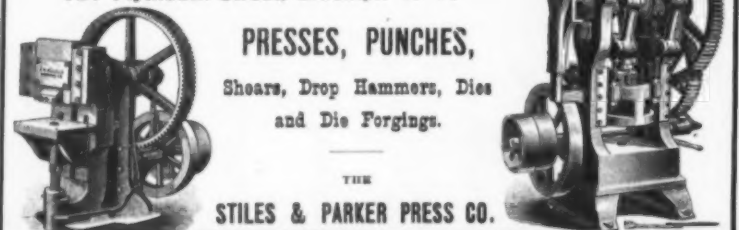
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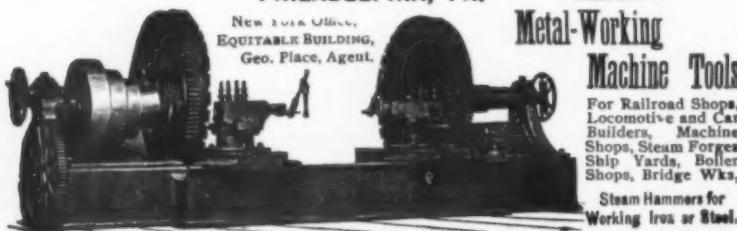
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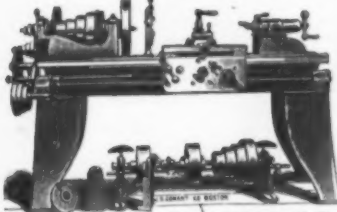
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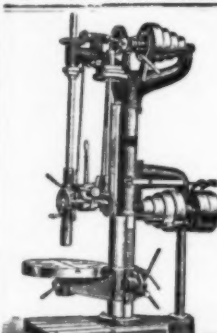
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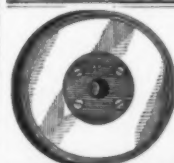
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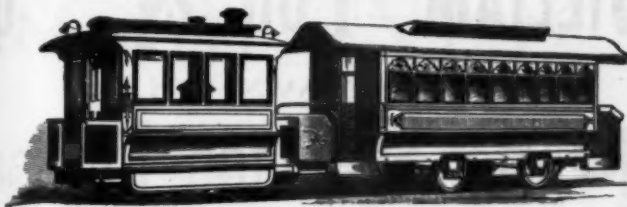
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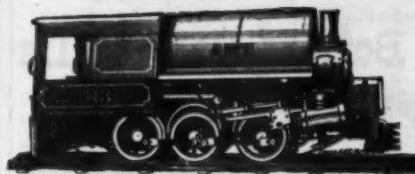
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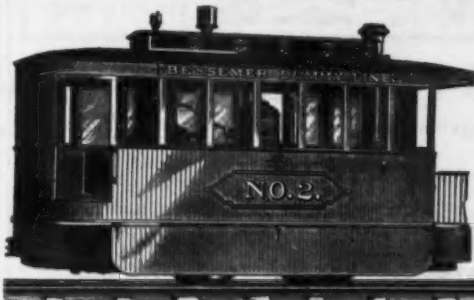
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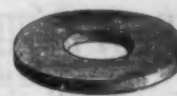
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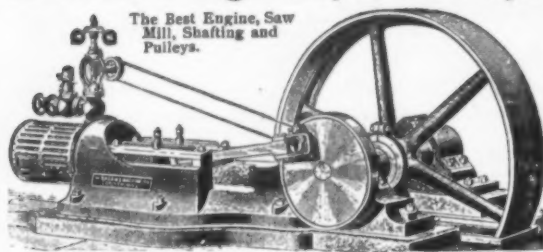
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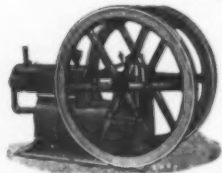


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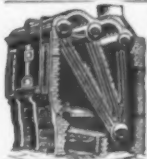
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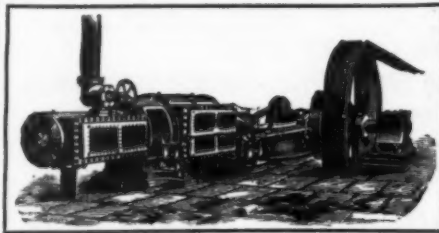
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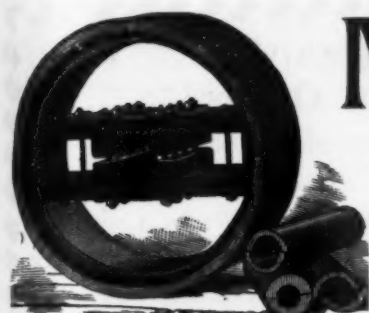
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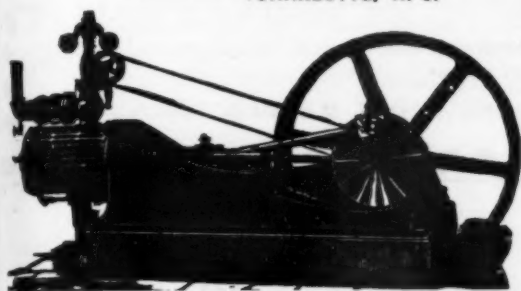
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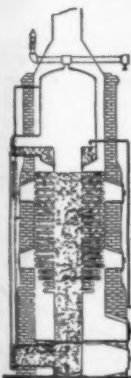
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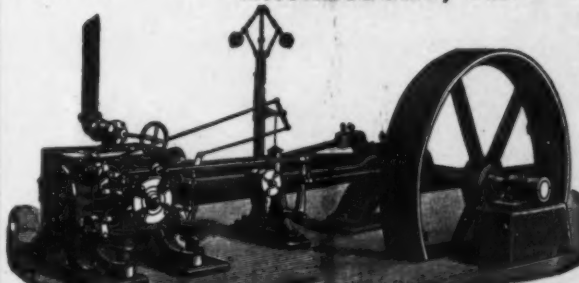


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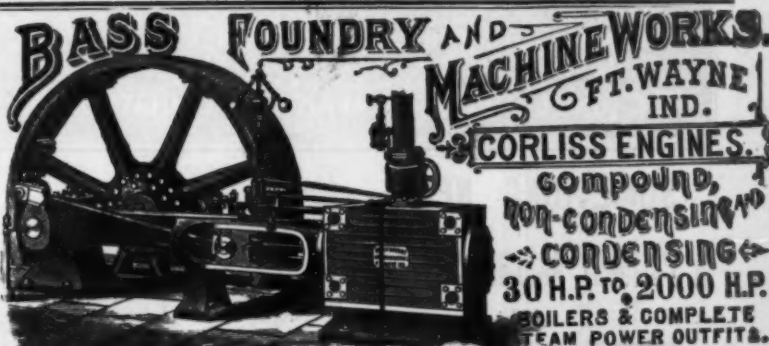


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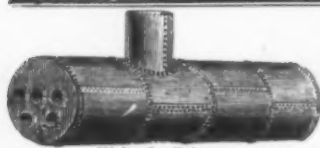
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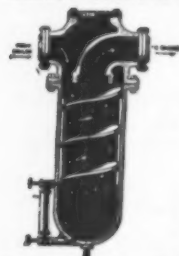
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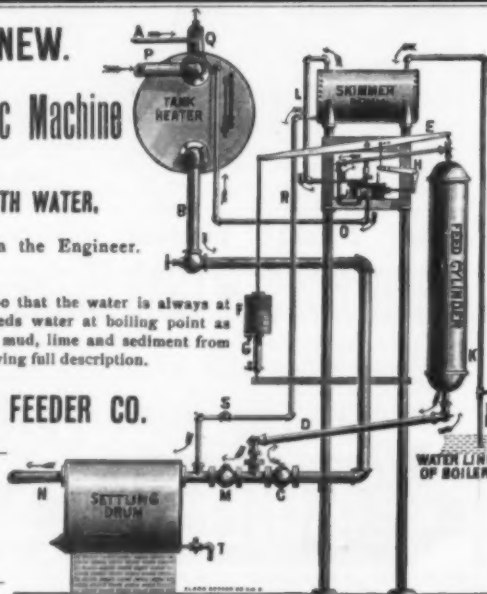
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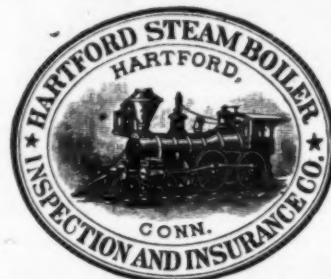
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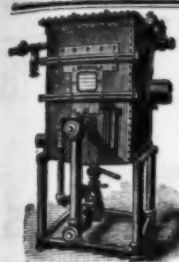
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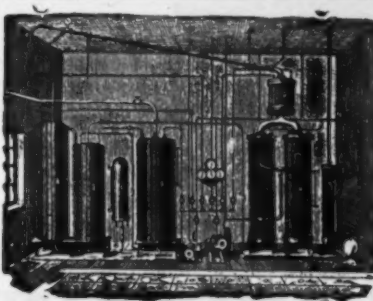
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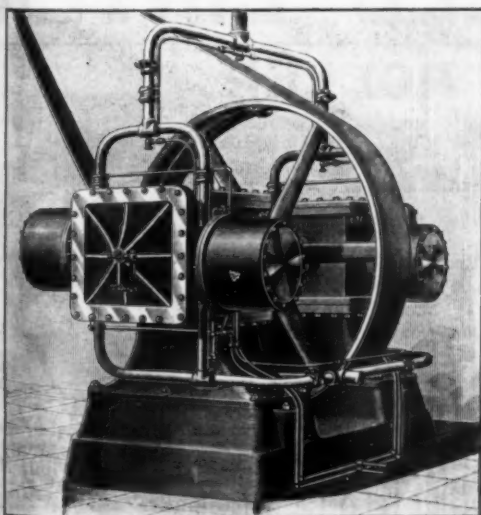
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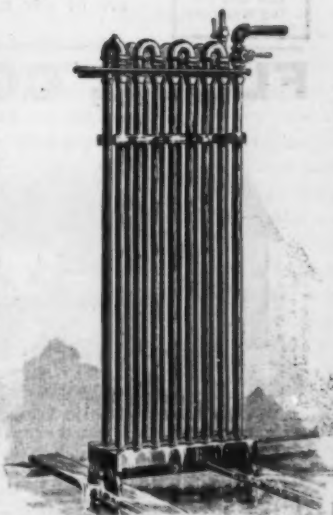
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Sectional and Vertical, Small Space Required, Capable of Indefinite Enlargement, Cannot be Disabled Its Economy in the Use of Water has not been approached.



IT is impossible within the limits of an advertisement to do more than enumerate the leading features of the apparatus which we offer. Our construction details are on a par with the excellence of the Compressor and Condenser, and we thoroughly understand our business. We are responsible Contractors for Ice and Refrigerating Plants of any magnitude, built, equipped and operated. Our patterns in single units range from 500 pounds to sixty tons per daily ice-making capacity. The building of SMALL PLANTS is a field by itself. We wish to say that in this respect there is no comparison between the work turned out by us and that otherwise offered in the market. Buyers wishing to keep abreast of the latest improvements will do well to call for our estimates.

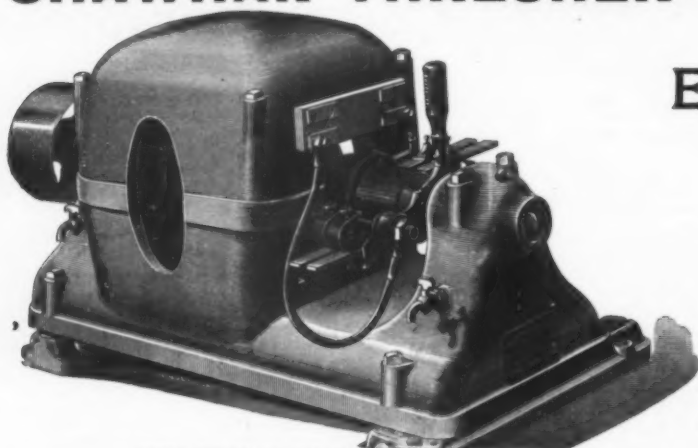


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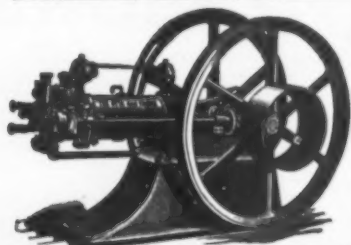
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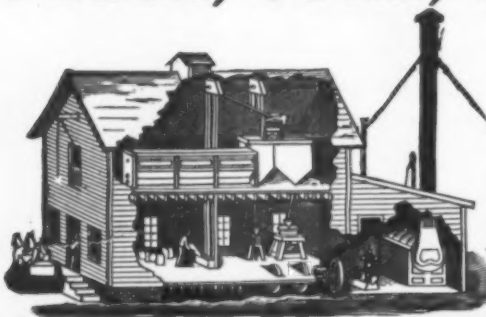
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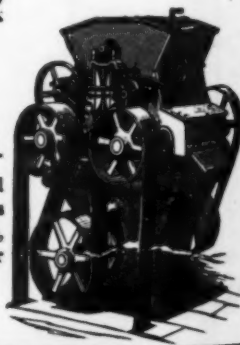


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MANUFACTURERS' RECORD.

(Name Patented 1893.)

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXV. No. 6.
WEEKLY.

BALTIMORE, MARCH 9, 1894.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE

Manufacturers' Record Publishing Co.
MANUFACTURERS' RECORD BUILDING,
Lexington and North Streets,
BALTIMORE.

RICHARD H. EDMONDS,
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BALTIMORE, MARCH 9, 1894.

THE New England office of the MANUFACTURERS' RECORD has been removed to the John Hancock Building, No. 178 Devonshire street, Boston, where Mr. S. I. Carpenter, the manager, will be glad to meet anyone interested in the South, or any manufacturers who desire to increase their Southern trade.

Do You Want Machinery?

If so, examine the advertising pages of the MANUFACTURERS' RECORD, where you will find the advertisements of 500 or 600 of the leading machinery manufacturers and dealers of the country. There is hardly any line of general machinery that cannot be secured from some one or more of our advertisers, but if you cannot find what you want in our advertising columns, write to the MANUFACTURERS' RECORD giving particulars of the machinery desired, and the information will be secured for you free of cost.

A BILL has been introduced into the Maryland legislature which, if passed, should have much effect in inducing immigration to that State. It is a bill to enlarge the scope of the State labor statistician's duties. It is proposed to enlarge the authority of the chief of the bureau and empower him to appoint local commissioners in every county to assist him in gathering information and advancing the interests of the bureau, particularly in the matter of bringing immigrants into the Maryland counties. An increased appropriation is also provided for. The present chief of the bureau, Mr. A. B. Howard, has been giving much time to the immigration question, and is fully convinced that it is one of the most important needs of the State. If the bill becomes a law it cannot fail to be of the utmost benefit to the State especially and the South indirectly.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4.00 a year.

Southern Newspapers and Southern Business Men.

The good which has been accomplished in the development of the South by the work of its newspapers can never be fully measured. Under many discouragements and often with but meagre support from the business men of the community, the majority of Southern papers have been persistently, day in and day out, laboring for the upbuilding of that section. It is to be regretted that the great work which they have done has received so little practical encouragement. In other sections the hearty support of newspapers is almost universally regarded as a matter of necessity, and every business man makes it a part of his business to deal liberally with his local papers. In the South, on the contrary, the value of newspapers is not so fully appreciated. Business men generally do not seem to understand that the newspaper is not a luxury, but a necessity; that if they want to keep up with the times, if they want to discover new means of developing their business, they must study carefully the newspapers, and not simply regard the newspaper as something to be glanced over hurriedly and thrown aside.

The local papers should be liberally supported, because the life and energy of every town is judged by the world at large by the looks of its local papers. The city that has no live, progressive paper filled with the advertisements of live, progressive merchants will attract very little attention from the outside business world. Every man contemplating an investment in any Southern town carefully studies its newspapers, as he can largely judge by them the character of the business men of the place.

While giving this hearty support to the local papers, which is the first duty of every business man, it matters not whether he be a manufacturer, a merchant, a banker or a lawyer, he should also carefully study such general newspapers as the MANUFACTURERS' RECORD, because in every issue he can (unless he be indeed a dull man) find something that may be made of value in his own business. Nine men might read a copy of any paper and do it so carelessly as to find little in it of value, while the tenth man, looking for opportunities for business or for information that will be of value, sees opportunities of utilizing this information in many money-making ways.

As progressive as have been many of the newspapers of the South in the past, there is very evident an awakened disposition to devote even more attention to all that concerns the material interests of this section than ever before. There is more disposition to avoid the sensational and the trifling fights and brawls that would never be mentioned in any

other section because of their small importance, and to give greater attention to all that concerns the welfare of the community. This not only means increased attention to industrial interests, but more attention to everything that pertains to the progress and prosperity of the South; everything, from improved farming methods, the diversification of Southern crops, the building of schools and churches, to the building of railroads and all else that helps to make a country great. The MANUFACTURERS' RECORD heartily commends the good work that Southern newspapers are doing and trusts that they may find a far more liberal support than they have ever received in the past.

A Neglected Source of Profit.

Thinking men will find a great deal of solid truth in the following argument made by the Jacksonville (Fla.) Citizen. The profits from economical farming have been often dwelt upon by the MANUFACTURERS' RECORD, and the Citizen's comment applies to other sections of the South as well as to Florida:

When unimproved lands are increasing in selling value at the rate of 25 per cent. a year, men are apt to neglect the planting and cultivation of crops. It is easier to buy and sell lands than to dig potatoes or save hay, or even to raise and market oranges. The facility with which money was made a few years ago in land speculations operated as a blight upon agricultural and horticultural pursuits. Farms, gardens and groves were neglected until the impression became established that there was no profit to be made from these industries in Florida. The speculative era passed by and left many men in a cramped condition. They were compelled to do something to meet the emergency which was upon them, so they once more turned their attention to the cultivation of crops.

Many of them have expressed surprise at the result. They have learned that farming can be made profitable in Florida, and today their agricultural interests are in a more promising condition than they have been before since the freeze of 1886. Other men have made thorough examinations of the mineral and vegetable resources of the State and have been surprised by the result. Phosphate is by no means the only mineral of value to be found in Florida. There is excellent brick-clay here and in unlimited quantity. Fire-clay is abundant and easily obtainable. Porcelain clays are here also, and the quality is pronounced by experts to be very fine. Money is needed to establish manufactures to develop these natural resources.

The chief advantage comes to Florida through the fact that it has passed through the worst period of financial depression that this country has ever known without serious impairment of credit. It has been demonstrated that the State is self-supporting and that it can stand a severe financial strain.

A New England Endorsement of the South.

Another financial journal which agrees with the MANUFACTURERS' RECORD that the South presents a most desirable field for investment is the United States Investor, which publishes this hearty endorsement of the section beyond Mason and Dixon's line:

The time is fast approaching when the South will be a favorite field for the investment of Northern capital. The New England and Middle States have for a long time been in the position of old countries, having more accumulated wealth than they could employ at home. An out-

let must be found for this. Not only for this reason does the South promise to be an attractive field for investment, but for another which may not, on the first glance, be welcomed by a large part of the population of the North. We refer to the fact that, in the opinion of good judges, many industries now carried on in the New England and Middle States can be more advantageously prosecuted in the South, or nearer the supplies of raw materials. In pursuance of this idea, certain Massachusetts corporations have recently asked for increases in their capitalization for the avowed purpose of erecting plants in the South.

Comparatively speaking, the South is in a better condition today than many other sections of the country. It had its "boom," but the collapse occurred some years ago, and as business has been conducted on conservative principles since that time, the panic of 1893 was much less keenly felt in that locality than elsewhere. Consequently the feeling of discouragement is not as great there today as in the West and North. Then, too, the South had a good cotton crop in 1893, and fairly good prices were obtained for it, in contradistinction to the exceedingly low prices which farmers in other parts of the country have been and are getting for staple crops. Therefore, a business revival may be looked for in the South as quickly as anywhere else, and this fact of itself, to say nothing of its special inducements to investors, is likely to command the attention of the possessors of money throughout the entire country.

This statement coming from a Boston paper is significant as showing the increased interest with which New England people are regarding the South.

First Business, Then Politics.

Everyone who has studied Southern conditions will acknowledge that during the past twenty-five years politics has claimed too much attention in the South. Politics won't increase the number of factories in a town. Politics won't build stores and houses. Politics won't attract investors; on the contrary, it often creates such oppressive laws for the benefit of its adherents that capital is kept away. Politics seldom increases a man's business in a legitimate way. In short, in a section which is only in the early stages of development, like the South, the professional politician can do untold injury, and is seldom or never a power for good.

We do not mean to say that Southern business men should ignore entirely the duties of citizenship, nor do we mean to say that every man who holds a public office uses his powers for personal gain and public injury. Many of the Southern representatives in the State and national legislatures, as well as many city or county officials, are men of the highest reputation, taking an active interest in the general welfare of the community, and exercising a powerful influence for its general improvement. But there is a vast distinction between these men and the professional politicians—the men who simply use the machinery of public office to further their own ends and the ends of their supporters.

As we have before stated, too much time has been wasted by good citizens over "campaign" and electioneering work which should have been given to business, but it is gratifying to note that along with other improvements less attention is being given to office-seeking

and more to the legitimate ways of the South's business interests. If these conditions continue they will produce a most important effect for the better throughout the Southern States.

BUSINESS CONDITIONS SOUTH.

Extracts from Letters to the Manufacturers' Record.

Catoctin Furnace, Md.—Catoctin Mountain Iron Co.: "Will put our furnace in blast when Congress ceases to study and legislate in the interest of foreigners, instead of their own country. Business here, like other points in the United States, flat, dead, and will remain so until the people send practical business men to represent them, instead of theorizing politicians moved largely by hate and prejudice to a policy inaugurated by their political opponents."

Stuart, Va.—Messrs. Lybrook & Clark.: "The general outlook for business enterprises in this county (Patrick) is very encouraging. This among the few counties of the State of Virginia has withstood the money panic, and has experienced no failure in any business whatever during the severe trial. We have a variety of products, all the finest quality imaginable. Our fruits, except peaches, we are confident cannot be surpassed in quality in the United States. All we need to make us as prosperous as any people is development."

New Castle, Va.—Messrs. Yoder & Slusser: "The outlook is not especially cheerful, but there are signs of a slow recovery from stagnation."

Hillsboro, Texas—Mr. George I. Jordan: "The outlook for business in this section is certainly good, and also the manufacturing interests. The Vulcan Iron Works is now in course of construction, a business intended to do all kind of machinery work and molding, both iron and brass; it is owned and managed by H. P. Collins and myself, the firm being Collins & Jordan."

King's Mountain, N. C.—The Dilling Cotton Mills: "We think the outlook is very good."

Anniston, Ala.—The Villa Rica Lumber Co.: "The Anniston Cordage Co. has received several new looms for the manufacture of cotton carpet, awning stripes, ticking, ducking, etc., a line of goods, we understand, not made elsewhere in the South. This is one of our new enterprises and promises to be one of our best. It reports that it is crowded with orders. We think from now on we will be able to give you good many items. Business looks somewhat brighter. For the first time in five or six months we are crowded with orders ourselves."

Baker's Mill, Fla.—J. T. Roberts, of the Suwanee Turpentine Co.: "Business prospects fair to good. One short line of railroad and one saw mill, also guano factory, will be and now is under construction."

"Splendid Service for the South."

Mr. William M. Furman, of Raleigh, N. C., in a letter to the MANUFACTURERS' RECORD, writes:

"It gives me pleasure always to assist the MANUFACTURERS' RECORD, knowing for a period of years its splendid service for the South."

THE granite mountain which furnished the material for the new Statehouse in Austin and is now supplying stone for the Galveston jetties is thus described by a correspondent: "This great mountain of stone is situated two miles north of Marble Falls, on the Austin & Northwestern Railroad, and is 175 feet high and covers seventy-five acres of ground. The road has built a track at the base of and entirely around the mountain for the purpose of loading with convenience the many tons of granite that are daily shipped from there."

THE WEEK IN THE SOUTH.

Condition of Business and the Latest Features of Southern Progress Summarized.

The week has been notable for the number of proposed municipal improvements and real-estate transfers, aside from the list of industrial enterprises. Many projects for water works, electric-light plants, etc., show that there is a desire on the part of Southern towns to take advantage of the low rate of money and make needed improvements. The active demand for approved bonds continues. The Macon sewer bonds, for instance, are sought by several Northern bidders. The readjustment of the Atlanta Consolidated Railway finances on a satisfactory basis indicates the faith New England creditors have in the South. The modified plan of Richmond Terminal reorganization has been approved by most of the security holders. Large land sales in Texas and in the suburbs of Georgia and South Carolina towns, the latter for residence sites, indicate much greater activity in the real-estate market, while the visits of several parties of capitalists to different sections of the South show that the outside desire to invest in this part of the country is strong. Local causes, such as bad weather, have affected trade somewhat, but reports from the principal Southern cities indicate that this can only temporarily retard the manifest increase in business.

Among the more important projects developed during the week are the 60-mile extension of the Savannah, Americus & Montgomery Railroad to be built at a cost of \$600,000, a \$1,000,000 company to build an electric road between Baltimore and Washington, a company to build a telephone line 167 miles long in Arkansas, a \$100,000 coal-mining company, a \$100,000 factory and a large combination building in West Virginia, a water-works plant and zinc furnace in Virginia, a phosphate plant, cigar factory and \$100,000 railroad depot in Florida, a mining company, packing plant, cigar factory and guano works in Georgia, a fertilizer and reduction works, also tobacco factory, in North Carolina, a \$50,000 barrel factory and a flouring mill in Kentucky, a foundry in Louisiana, also one in Texas, and a \$100,000 ice plant.

Want a Non-Leaking Roof.

AUGUSTA, GA., February 26.

Editor Manufacturers' Record:

Can you kindly advise us where we can get a roofing material that will not leak when covered by snow or heavy sleet? Our roof is almost square pitch, is covered with good, well-sealed and painted tin and is less than two years in use, and is perfectly tight until we happen once or twice a year to have a few inches of snow or sleet, when it drifts to the valleys next to parapet wall and banks up a foot or more, and when the thaw comes, in comes the water from a thousand places. Our very best mechanics have done their best and are utterly unable to remedy the trouble. The theory advanced is that the great change of temperature from our hot summer sun to snow, by expansion and contraction, pulls the seams loose, but there must be some means known in the North of putting on a roof that will stand the snow. Our roof is about 120 squares, and there are three or four others about the same size that suffer as we do who are waiting to hear from this letter with a view of putting some other covering perhaps over the tin.

Can you not advise us what to get and from whom, or refer this letter to some of your advertisers or friends who will be glad to sell such material as we want? It is our desire, if possible, to get a covering guaranteed to stand our heat and cold and not leak, and, of course, we want something that will be lasting.

PAUL MUSTIN & CO.

Southern Water-Powers and Their Future Utilization.

By W. J. Thalhacker.

The perfecting of apparatus for the successful transmission of power by electricity will surely bring before the world more conspicuously than ever the resources of the South. Cheap power means many manufactories. Natural gas has supplanted coal in the petroleum regions, and the many now inaccessible water-powers in the South will as surely supplant steam.

It is a remarkable fact that the first transmission plant successfully established in this country was not in the East, as one would naturally suppose, but in the far West, being between Oregon City and Portland, a distance of thirteen miles. Since the installation of this plant the progress has been rapid, especially in the West, culminating in the gigantic scheme now fully under way in the East—Niagara.

The probable reason for Western development leading other sections lies in the fact that coal was high and water-powers numerous and undeveloped.

When it is realized that coal will average \$3.00 per ton throughout the manufacturing sections of the South, and at this price steam cost between \$35.00 and \$50.00 per horse-power per annum, while, ordinarily, water-power does not exceed \$5.00 to \$10.00, the difference is striking. Now, what are the conditions already existing and ripe for development in the South? There are hundreds of towns and cities where, under the impulse of public spirit and the wonderful new growth of the new South, cotton mills, street railways, electric-light plants, already exist. It is probably no exaggeration to say that in the Piedmont region of the Virginias, Carolinas, Georgia, Alabama and Tennessee there is no city or town where does not exist within fifteen or twenty miles, and in many cases less, undeveloped water-powers of abundant capacity to operate every cotton mill, street railway, electric-light plant and all other industries that require power.

Except under extraordinary conditions the hydraulic and electric cost of development, including transmission, will not, in large units of power, exceed \$15.00 per horse-power per annum up to a distance of ten miles. This cheapened power means dividends on plants that are now falling behind in their interest accounts. It means the starting of new wheels and the hum of new machinery, for cheap power most certainly will attract and develop capital and manufacturing interest from every part of the country.

Look at the Southern cotton mills. The dividends, amounting to over \$300,000, paid by the mills in and around Augusta, Ga., during 1893 have attracted general attention. The reason is not far to seek. Cheap power (\$5.00 per horse-power per annum for water taken from canal) explains the whole situation. The city of Augusta invested a million or more to make the immense power of the Savannah available. The investment is now yielding handsome returns. But every Southern city is not so fortunately situated, and those which are on rivers probably cannot afford to develop existing powers by costly canals. But there are hundreds of Southern cities that can, by going ten miles, harness the horse-powers that are going to waste in the rivers and make them do their bidding, from the running of a fly fan to the operation of a cotton mill, and at a less cost than steam is now being produced.

Another source of cheap power. Throughout the coal-bearing regions of the South there are many mines, open or well located, that lack a railway to make them profitable. It will cost less to transmit the power by electricity, locating the steam plant at the mouth of the mine, than it will to haul your coal if you owned the railroad. The day is coming, and rapidly,

too, when power for all industrial life will be electricity, generated by steam at coal mines or from contiguous water-power. Indeed, one maker of electric-heating apparatus claims that from conclusive tests electricity for heating purposes at \$60.00 per horse-power per annum is equivalent to anthracite coal at \$7.00 per ton. Electric cooking has ceased to be a novelty. May not even those of the old South who have reached the full measure of three score years and ten live to see the day when our water-powers and our inaccessible coal mines may be brought to our doors and, without smoke or smell, become our obedient servants through the transmission of these energies by electricity?

There is still another class of enterprises that are seeking cheap power. The wonderful success that has attended the manufacture of cotton in the South has led many old mills located at convenient water-powers to keep adding to their plant from year to year until they have outgrown the capacity of their water-powers. Then steam was added, until probably a third of the power used is steam.

I have just such a case in mind. Twenty years ago a small mill was built. As the river afforded 1500 horse-power, no thought was ever entertained of the power ever being fully utilized. Wonderful success attended the venture until today it is one of the largest mills in the South, and has exceeded its water-power capacity by nearly 700 horse-power. Within ten miles there is a water-power that exceeds 1200 horse-power that cannot possibly cost over \$15.00 per horse-power delivered at the mill shaft. The day is not far distant when the far-seeing president will be using this water-power, now ten miles away, instead of steam, for he will save over \$10,000 annually by the operation.

Numerous other instances could be cited, but one is sufficient to show the point in question. Let investors look after water-powers. Let our people call attention to their advantages, and capital seeking legitimate investment will as surely turn to them as the needle turns to the pole.

Prizes to Exhibitors.

As a special incentive to exhibitors the Interstate and Industrial Exposition at Macon, Ga., will offer special premiums for the best articles manufactured from Southern product. Assurances have been received that Florida, Alabama, Tennessee and the Carolinas will be well represented, and the probability is that at least six States will have exhibits on the grounds.

L. C. CANNON, secretary and treasurer Thomson Gold Mine Co., Spartanburg, S. C., writes to the MANUFACTURERS' RECORD as follows: "Ours is not a boom property, but a valuable property long neglected, with a history of ante bellum days, when the star in the West drew miners away from former haunts to the golden Pacific. We are developing this property under the Dahlonega hydraulic system and have no cause for fear of its paying qualities. The formation is talcs, micaceous slates, with wide veins of free gold in quartz, and stratified quartz, gold-bearing, intermingled through the binding slates, which are generally very soft. When we reach water-level at six feet from surface we naturally come in contact with pyrites, very rich, and the resultant gold always round, nuggety; never flat or flaky. We have numerous large veins from three to twenty feet wide, but have as yet only hydraulicked a portion of one vein through old work to a depth of forty feet, and yet have not touched the lowest tunnels of the old primitive work."

THE Young Men's Business League at New Orleans, although but recently organized, now has 600 members. Frederic J. Cooke has been chosen secretary, and E. L. Bemiss, treasurer.

The "Boom" as an Educator.

JACKSONVILLE, ALA., March 3.

Editor Manufacturers' Record:

During the so-called "boom period" great hopes were entertained that this lovely little town, the county seat of Calhoun county, situated in the very heart of the richest mineral region of Alabama, would become a large manufacturing centre. During that delusive era, however, there was a conservative caution about every movement made by its promoters, that in the midst of the general dullness and depreciation that now prevails it has lost little of its prestige. The few industries that were started have been successful and solvent; the many improvements that were made add largely to the general thrift, and outside a few speculators in town lots no investment prudently made and honestly managed has suffered.

In the tidal wave of anticipated prosperity now surely waiting to flow in on this favored country you will hear from Jacksonville.

The "boom" was a great educator. Its collapse conclusively proved that no amount of advertising or building or improving will attract population to a town that has not abundant natural resources to employ the newcomers permanently and profitably. The South today is strewn with the wrecks of large industries most unfortunately located—built with a view to impossible markets and miscalculated cost of production. Worse still, hundreds of old, worn-out plants were unloaded in this country from other sections. Failures at home, there was slim chance of their success in a country bereft of capital and absolutely bare of skilled labor. But they answered the purpose of the town-boomers, and whilst the buildings were being erected for them, the prices of town lots advanced.

We hear a great deal said of losses in the South owing to the failure of boom towns and improvident investments made by persons who never saw what their money was invested in. Those persons took a gambler's risk, and, having lost in the game, have little reason to complain.

But we hear nothing of the successful investments of Northern capital in banks, cotton mills, coal mines and hundreds of other institutions that are flourishing in these parts in the face of the most serious and pinching season of depression the country has ever experienced.

There is no risk of prudent investment in the South if the object is wisely chosen. Practical knowledge, economy and honest administration have been as successful here as in any other part of the country. There are some things which must necessarily be more prosperous in the South under wise, practical direction than elsewhere, and there are others that can never be for want of favoring conditions.

In the new era that seems to be dawning on this section the lessons learned in the past will strongly influence the future. The next advance will be on the line of the extensive manufacture of that which is cheapest and most abundant. And first of all, we are bound to see an enlargement of the cotton-manufacturing industry. Throughout the entire South there is no place more singularly favored by nature for the successful establishment of a large cotton mill than Jacksonville. Magnificent springs rise in the mountains all around and flow down through the town, rising to the magnitude of creeks. These cool, limpid waters flow incessantly summer and winter without diminution in volume sufficient to supply a city of 50,000 people. The country around is a vast cotton field, producing the very best quality of upland middling staple. Within twenty miles by rail is one of the best coal fields in the State. Two railroads, the East Tennessee, Virginia & Georgia and the East & West Railroad of Alabama, compete for the business of the

town. Every material needed in building a mill is at hand—lumber, sand, lime, sandstone, brick clay and slate. Steam coal of the finest quality is laid down at \$1.25 a ton. Elevated 800 feet above sea level, the climate is salubrious intensified. In midsummer the cool mountain breezes sweep down through these beautiful valleys, making the nights delightful and the mornings bracing and healthy.

A New England expert, one of the best known mill architects and engineers, visited this place in 1890 and said that in all his travels in the South Jacksonville was an ideal location for a large cotton mill. The purity and abundance of the water, the cotton supply, the cheapness of fuel and the salubrity of the climate was all that could be desired.

These magnificent advantages are destined to be put to practical use before many months. Before the beginning of the late business depression, the Union Cotton Mills Co. was organized with a view of erecting here one of the largest and best cotton mills in the South with a capital of \$200,000. The intention of its founders was to build a mill for the manufacture of bleached goods. One of the most successful and practical New England mill managers resident in the South offered to take charge of the enterprise. Indeed, it was his conception. Half the capital had been secured when the financial storm broke, and the subscribers and promoters agreed to postpone the enterprise until the business affairs of the country shall have become settled. The anticipated revival of business has caused the originators of this enterprise to take up the work where they left off. Negotiations are about being resumed and the work of organization perfected. The character of the men who have this enterprise in charge is in itself a guarantee that honesty, economy and good management will prevail from the start. It will be a New England plant, with Southern connections of the very highest order. Indeed, it would be impossible to find in the entire South a better class of men than those who have taken the matter in hand, and who reside here. They are noted for good judgment, conservative action and successful to a very remarkable degree in their own affairs.

The plan of inviting the absolute control of practical New England people where investments have been made in cotton manufacture in the South has resulted in sound business methods and large dividends. They are great educators, and this country needs practical instruction as much as any known want. If we had more of it in these parts we would have less bad politics, sounder financial notions and be generally benefited. The liberality of the citizens of Jacksonville to the new enterprise has been of the most bountiful character.

The control and use of one of the largest and purest of the springs have been donated to the mill by the town council, and the riparian rights, equal to 100 acres of land inside the incorporated limits of town, conveyed free. The State of Alabama exempts from taxation for five years all properties, real and personal, of any cotton mill or establishment of industry erected in the State. The Jacksonville board of councilmen generously agreed to exempt the Union Cotton Mills from municipal taxation for the same time.

The Jacksonville Mining & Manufacturing Co. has been munificent in its donation—fifty acres of land, already platted and laid out in lots adjacent to the railroads, and the right to take free from the extensive properties of the company adjacent all stone, sand, timber, slate, brick clay and materials for building. The very best steam coal is assured at the low cost of \$1.25 a ton. With an abundant supply of cotton, cheap fuel and an unequalled climate, the purest water in the greatest

plenty, excellent railroad and banking facilities, and a liberal, law-abiding and hospitable people, high-toned and moral, we are prepared to stretch forth our hands to the newcomers and bid them a hearty welcome. The skilled mill people will here find comfortable homes in a land of almost perpetual summer, good schools and churches for all the leading denominations (Episcopalian, Baptist, Methodist, Presbyterian, Catholic), complete political and religious tolerance, and kindness and charity beyond measure.

Such is the union that is most needed in the South; not the vaunted union with the West so much talked of by the politicians, but a cordial union with the hardy, thrifty, industrious people of the Eastern States and of New England, which in old times sent so much good blood into the South, and which now outcrops all over this section in successful men of business. There is a universal desire in this section to have less politics and more business. The masses of the people would gladly welcome the day when participation in political matters would be a recreation a few days before the elections and entirely forgotten a few days after. The South will never see this desired rest until her spindles are humming, her furnace fires aglow, her fertile fields once more responsive to the hand of the contented husbandman and her millions of agricultural laborers educated up to some more profitable occupation than raising six-cent cotton.

There is another fact worth alluding to, and one of the greatest importance in connection with investments South. Of all the Southern States, Alabama has been most liberal to the manufacturing element. There are no harsh laws in her statutes repressing capital or antagonistic to its investment. There are no enactments interfering with the management of business. The State has always been very conservative in this respect, and this was exhibited in a very marked manner by exempting new industries from taxation for five years. The laws governing corporations are exceedingly broad and liberal, and assessments of property are fair and just. Labor is abundant and notoriously cheap. It takes little in this genial climate to feed and clothe a workman. Indeed, it is a very paradise for the factory operative, and that is the reason why we never hear of strikes or labor troubles in any of the great cotton mills of the South.

The day of the speculative boomer has passed. We are on the eve of a healthier and more stable movement. The mills to the cotton, capital to certain remuneration, population to the waiting places—these are the wants of the hour.

Our iron now sets the price in the country. It is only a matter of time when the Southern cotton mill will regulate prices in Manchester. ALKANET.

Four Hundred Dollars from Five Acres.

F. M. Taylor owns fifteen acres of ground near Anniston, Ala., and is experimenting with diversified crops. Last year he gave cotton a fair test. He prepared three-fourths of an acre in the best manner, planted it and gave it good cultivation and raised from it 390 pounds of lint cotton, or at the rate of a bale to the acre. This sold for seven and seven-sixteenths cents per pound. This year he expects to make from 4000 to 6000 pounds of tobacco from his five acres, and believes it will bring at least an average of eight cents a pound. In other words, there will be a probable income of \$400 from the five acres. If he is successful in realizing half that sum the result will show what can be done with Southern lands properly cultivated.

An important real estate transfer at Cordele, Ga., recently, was of twenty houses and lots purchased by J. E. Blvins, a capitalist, for investment purposes.

Copper Reported in Northwestern Arkansas.

CULP, BAXTER COUNTY, ARK., Jan. 31.

Editor Manufacturers' Record:

Three years ago an association of persons, of which the writer was one, located 440 acres of mountain lands in sections 23 and 26, township 17, north range 12 west, Baxter county, Ark., to mine zinc. Last June it fell to my lot to personally superintend and open this mine, build a camp, blacksmith shop, dam for creek and pond, burn charcoal, etc. Under the direction of John Woolfer, a life-long miner, with more than forty years' experience, ten of which have been spent in these mines of Arkansas, and who was the discoverer and at one time owner of the "Morning Star" zinc mine, of Marion county, this State, which furnished the jumbo of zinc that took the first and world's premium for zinc at the World's Fair just closed at Chicago, I began work with a small force and cut a drift into the mountain forty feet up the side by seven feet wide and at an average depth of say eleven feet. I began this drift 340 feet by the aneroid above Cataract creek waters, which run at the foot of the mountain. At the same time I worked one shift, beginning directly above this, and began another drift, running about twenty-five feet up the mountain, and cutting it seven or eight feet wide, with an average depth of four or five feet. About this time our lower drift gave us such excellent carbonates and silicates of zinc that we were assured by Mr. Woolfer and others of abundant success; so we laid by the drill and dynamite and cleared away and built "Our Camp," the blacksmith shop and other needed improvements. In November we began work again, chuted down about seventy tons of crushed rock from our zinc drift, at the same time blasting and digging away in the other drifts. On the 5th of January inst. we found a bunch or pocket of copper, sound and clear, of about two pounds weight, but not quite so heavy and pure as the samples sent you, in a solid Hilderberg limestone. From this on down the lime rock is more or less "shot" with copper. These samples are down twenty feet perpendicular, and in the mountain forty feet horizontal, so you see that this is yet but the outcrop. On Friday, the twelfth, we discovered one of the mineral chimneys of this property on the north side and in the bottom of this drift. On Monday, the fourteenth, we uncovered the top to find a perpendicular shaft about three feet in diameter and seventeen feet deep. This Woolfer and one of my men explored with lantern and hammer, and brought up samples from top to bottom which were all more or less impregnated, and the deeper the better, and Woolfer declares that the main body of copper is still below this shaft. This gives us full knowledge of at least twenty-two feet deep of heavily-laden rock. We have outcrops all over the property; hence I do not hesitate to say that the depth and breadth is such that millions of tons may be mined and yet there will be other millions just as good. My personal examinations of the counties of Arkansas northwest from Batesville during the past four years have convinced me that all of the country from Syllamore, in Stone county, to Joplin, Mo., is mineral-bearing in lead, zinc, copper, a little silver, traces of gold and an abundance of the finest fossiliferous marble in the world. I repeat that without doubt we have the finest fossiliferous marbles, of nearly all shades and colors, in the world in these counties. I have found good carbonate and silicate of zinc outcrops as low down as Syllamore creek, near Syllamore town, and on up both sides of White river, so that they include in our State all or large parts of Stone, Baxter, Marion, Searcy, Boone and Newton counties. Since there is quite a

large output of copper at Tomahawk, two miles south and thirty miles west from here, and from what I know of outcrops of this mineral for three or four miles west of this, I suggest that the copper field of Arkansas is east of this a couple of miles and west thirty or more miles, with a probable narrow boundary north and south. Geologists tell me that the rocks of this part of Arkansas are all in place, and have never been disturbed save, perhaps, by an electrical "blow-out," as shown by the boulder formation where we discovered our copper and the mineral chimney above referred to. It is so on this mountain and elsewhere in this part of the State, so far as I have observed. We have on this property, beginning with the creek and going up the mountain, every strata easily distinguished; here the Hilderberg; again the Dolomite; again the magnesia limestones interspersed with silicious rocks. This is amidst the Ozark mountains, and the waters of the White river are here about 500 feet by the aneroid above sea level; we, two and a-half miles from the river, at the water of Cataract creek, which runs by the door of our camp, are 550 feet; the opening of our mine 360 feet average above this, and the top of the mountain 550 feet above the creek, or 1050 feet above sea level. The mountains here are covered with beautiful oaks, pines, cedars, hickories, ash, elm, hard and soft maple and similar trees. Pure water, delicious, cool, exhilarating, healthful, abounds everywhere.

We are looking forward eagerly to find the man or men who will build us a railroad. We hope he will come soon, for our nearest railroad station is one of the termini of the Missouri Pacific Railway, at Batesville, sixty-nine miles down White river, or eighty miles to West Plains, Mo., a railroad station to our northeast. So far as our own company, the Jessie J. Copper & Zinc Co., is concerned, we can ship its product to market every day in the year at a nominal cost by hauling over an all down-grade wagon-road to White river, two and a-half miles away; thence to Batesville, sixty-nine miles; thence to any part of the world by either rail or water.

W. A. WEBBER.

More Salt Found in Texas.

The deposit of salt recently discovered near Big Springs, Texas, shows that a very large bed of it lies under that portion of the State. In a letter to the MANUFACTURERS' RECORD Mr. R. W. Walker, of Big Springs, writes:

"At a depth of 950 feet the driller, Mr. C. W. Breach, struck solid rock salt and has continued in it since, making 360 feet of salt, and still the drill has not reached the end of it. Dr. J. W. Barnett washed the slush, one bucketful, in three buckets of water, and secured nearly one pound of solid salt, free from gypsum or other foreign substances. The drillers say that they have struck two or three thin layers of red slate in the salt. The material above the salt deposit is principally clay and slate. It is believed that the salt can be pumped out in solution and the beds made use of in that way."

How Texas Colonists Succeed.

The success of immigrants who have located in Texas is well shown by a colony of Germans in Ellis county, whose economy, industry and good management form the keynote to agricultural prosperity and independence. They buy but little food of any kind, as they all raise a few fat hogs, keep plenty of chickens, make an abundance of milk and butter, and raise an ample supply of fruits and garden vegetables. They have no need to call on the grocer but for the very few articles they cannot raise on their own fertile, well-tilled farms. They are considered models as farmers and as good peaceful citizens.

Roasting Southern Ores.

Roasting ores before placing them in the blast furnace is regarded as a questionable economy by the majority of furnace managers, because of the expense entailed in handling and cost of fuel required for the process. With the old forms of roasters there was good reason for this, as the construction of the kiln necessitated the employment of a number of extra men to fill the ore in and withdraw it, and a still heavier item was in the large amount of coal and coke braize which had to be used to give satisfactory results. The question of roasting or not doing so is purely a matter of economy, considering on one side the expense of the process, and on the other the saving of improvement which may appear in the pig iron.

In the South there is so little of the carbonate ores that in considering the question of roasting they need not be taken into account. Such magnetic ores as occur there are generally sufficiently free from sulphur not to need roasting. In the red hematite ores, which form the greater part of the Southern ore supply, roasting might be carried on to advantage with the ores of some districts, or with certain varieties of ores, but not with all. The ore usually known as "soft" red hematite would not gain much by roasting, since it carries no combined water and seldom over 5 or 6 per cent. moisture; besides, since the greater part of it is very fine, it would be difficult to draw the gas through the mass of material in the kiln, and in consequence the process, even if tried, would result in an uneven product. The harder ores, classed with the "soft" ore because they contain little or no lime, would not derive any particular benefit either, since the result would be merely to deprive them of perhaps 4 or 5 per cent. moisture and effect a partial change of the sesqui-oxide Fe_2O_3 into the magnetic oxide Fe_3O_4 . From this no commercial benefit can be derived, unless it is desired to completely magnetize the material, and that would require a longer time in the kiln, more heat, and consequently greater expense. The red hematite ores containing from 10 per cent. upward of carbonate of lime would be improved, in that the carbonic acid of the limestone would be removed, thus reducing the bulk for a given quantity of iron in the ore, and also lessening the service required of the gases and heat in the blast furnace. The calculation is extremely simple: Limestone contains 56 per cent. of lime and 44 per cent. carbonic acid. Therefore, if an ore contains 20 per cent. carbonate of lime and is roasted, 44 per cent. of this, or 8.8 per cent., will be driven off, leaving 11.2 per cent. lime, and, supposing the ore had contained 40 per cent. iron, it will now, when roasted, contain 43.8 per cent. iron. In addition to this, practice has shown that there is a marked improvement in the quality of pig iron from roasted ores over that produced from raw ore.

But the principal use of ore roasters in the South should be in freeing the brown hematites from their water of combination. It is a well-known fact that pig iron made from a brown hematite mixture is stronger, darker and better than that made from red ores, and it is as well known that if the brown ores are roasted before being used the quality of pig iron is improved at least one grade, besides having a better standing in the market. These brown ores usually contain, whether washed or direct from the mine, from 8 to 15 per cent. of water in chemical combination, requiring a considerable degree of heat to disassociate it. Besides this, there is usually from 3 to 5 per cent. of moisture, which can be driven off at 100° Centigrade. This makes a total of from 11 to 20 per cent. of water shoveled into the furnace, and consequently withdraws heat from the latter. For this purpose the roasting-kiln is far better and

cheaper, always provided that the material is handled economically. Take, for instance, such a kiln as is in use at Shelby, Ala., where the wet ore from the washers is run in mine cars to the top of the kiln and dumped in. From the chutes at the bottom the fillers load their buggies, and as the ore passes over a grate, it is freed from dust. The kilns roast 125 tons of ore per day, consuming about three tons of bituminous coal in the gas producer attached. Two extra men do the work on each shift, or four to roast the amount given.

Furnace practice at Shelby has shown that by using roasted ore the output is increased and fuel consumption diminished, and the furnace works more regularly, giving greater uniformity to the grades of iron produced, and wherever roasting has been given a fair trial the same result has always been secured. Assuming the coal cost \$1.50 per ton, which is a rather high price, and the four men at \$1.00 per day each, the total cost of washing 125 tons of ore is \$8.50, or 6.8 cents per ton raw ore. If 15 per cent. water has been removed, 125 tons raw ore will give 103 tons roasted ore, costing 8.2 cents per ton. But instead of charging into the furnace an ore containing 45 per cent. iron, the roasted ore contains over 52 per cent. iron, and, moreover, already has the heat which it would otherwise have had to absorb from the furnace. As the ore is richer in iron, the output of the furnace increases, thus reducing the cost, and more even working enables the manager to drive it harder, still further increasing the output, while at the same time the product is stronger, better and more uniform in quality than if made with raw ores.

Roasting is one of the "small economies" which the Southern furnaceman is rapidly introducing and where any considerable portion of the mixture is brown hematite it will in time be adopted.

More About Georgia Gold Fields.

Mr. W. T. Norrel, who has had an experience of thirty-five years in the gold-producing sections of the South, has recently been giving considerable attention to the abandoned workings in Gwinnett county, Ga., in the vicinity of Buford. These are some of the oldest workings in the country, and tradition has it that Spaniards extracted metal from them several centuries ago. This field as well as the ones in other parts of Georgia and North Carolina, were abandoned at the time of the California discoveries, and work in the Buford region has never been resumed, according to Mr. Norrel.

The result of his observations is given by Mr. Norrel in the following letter to the MANUFACTURERS' RECORD:

"The gold in this region is contained in quartz similar to Western mines, and the veins have every indication of being true fissures. The deepest cutting so far discovered is fifty-seven feet, and the ore at the surface is from eight to ten inches thick, yielding on analysis \$10.00 to \$13.00 in gold per ton of 2000 pounds. At the bottom of this shaft the ore is thirty inches thick and yields \$30.00 per ton.

"A mining expert from the West who has been examining these deposits reports that the auriferous quartz veins of the district are in groups running from northeast to southwest. The rock near the surface is principally decomposed slate and schist, changing to a gneiss formation at a depth of forty to fifty feet. The veins, which have every indication of being continuous fissures, have been traced five miles. Most of those found near the summits of the ridges are sealed and broken, becoming solid at a depth of a few feet. All of the quartz and much of the decomposed slate between the walls from the surface down show free gold.

"The climate of this section is favorable

for continual mining operations, while labor and supplies are cheap, and an ample supply of timber and water is right at hand. As the people in this part of the country are principally farmers, they take little interest in developing the quartz deposits, and good property can be obtained at a nominal figure."

The World's Greatest Winter-Wheat Mill is a Southern Mill.

The Noel Mill Co., at Estill Springs, Tenn., has a mill with a daily capacity of 3500 barrels of flour. It began operations on January 4 and is now running regularly. This company has the largest winter-wheat flour mill in the world, the next largest being the plant of the National Milling Co., of Toledo, Ohio, which has a daily capacity of 2500 barrels of flour.

An officer of the company writes the MANUFACTURERS' RECORD as follows: "We obtain our wheat from Tennessee, Kentucky, Indiana, Missouri, Illinois and Kansas, preferring Tennessee wheat, which we think produces the better grade of flour, with larger percentage of yield of high grade. We sell the bulk of our flours in Virginia, the Carolinas, Georgia, Florida and Alabama, but have just begun an export business, having recently shipped 200 bags of flour via Baltimore to each of the following points: Amsterdam, Glasgow, Liverpool and Belfast. Our intention is to place from 1000 to 1500 barrels of flour in Europe and Great Britain and Ireland daily. Our mill is operated by water-power, having three 44-inch Lowell turbine wheels under a 24-foot head of water. The power is furnished by the Elk river, which rises in Tennessee near the Kentucky line and empties into the Tennessee river near Decatur, Ala. The buildings are probably the largest in America used for flour manufacturing, having a total length of 542 feet, a width of fifty-eight feet, and being six stories high. They are built of brick and rest upon stone foundations throughout, all of which are upon natural bed rock. Attached to the mill is an elevator with a capacity of 520,000 bushels of grain. The mill, being built by Nashville capital and managed by Nashville men, is properly considered a Nashville institution, and makes the flour capacity of that place 9000 barrels daily. It is next to the largest winter-wheat milling point in the United States, closely pressing St. Louis. The milling business of Nashville has grown to the above capacity from 300 barrels daily ten years ago."

To Make Vitrified Brick.

Commenting on the proposition to pave some of the streets of Savannah with vitrified brick from Chattanooga, Mr. C. B. Warrand writes to the Savannah News and says: "It seems very strange to think of doing this, as the same brick can be purchased within fifty miles of Savannah at but very little greater cost than common brick." And to this adds: "A description of how the vitrification of any good clay brick is produced may be of some interest. When a kiln of bricks has been thoroughly burned the fires are fed with green wood or green fagots and common salt is shoveled in on the fires.

"The intense heat at once destroys the salt; the chlorine mixing with the steam of the green fagots forms hydrochloric acid, which combines with the clay at white heat and forms a coating of alum glass, or, to use the technical expression, the bricks become vitrified. The whole operation is performed within one hour. Rock salt costing \$6.00 and \$7.00 per ton will answer, so that the cost of vitrifying would not amount to five cents per 1000 brick. Why spend the money on a 400-mile haul when the same brick can be produced at Johnson Station, or near Hardeeville, for much less money? Both yards are operated by Savannah capital.

ARE THE COAL OPERATORS IGNORAMUSES?

Mr. M. Erskine Miller Replies to the Attempt Made by the Wheeling Register to Show that the West Virginia Coal Operators Are too Ignorant to Understand the Effects Which Would Follow Free Coal.

THE FACTS ABOUT NOVA SCOTIA COAL.

WASHINGTON BUREAU, MANUFACTURERS' RECORD, ROOM "E," RAYLEY BUILDING, March 7.

The coal operators of West Virginia are in a state of righteous indignation over the attack upon their intelligence contained in the six-column article which appeared in the Wheeling daily Register of February 21.

I have just had an interview concerning the article in question with Mr. M. Erskine Miller, whose views no doubt represent those of nearly every operator in the State—certainly of those whose interests will be affected by free coal. Said Mr. Miller: "This attempt to show that the coal operators are a lot of ignoramus is calculated to bring upon its authors ridicule rather than the approval and endorsement of well-informed and fair-minded men."

"The coal operators, however," Mr. Miller went on to say, "could well afford to treat with silent contempt the attack upon their intelligence if that was all, because the people of West Virginia know very well that they are not as a class quite so ignorant as the Register makes them out. But that is not all. The article in question, the burden of which is to show that free coal will not hurt West Virginia, is a cunningly-devised scheme to misdirect public sentiment and put the coal operators in a false light, to the end that their business may be taken away from them and turned over to the Dominion Coal Co., whose field of operation is Nova Scotia and whose market is New England, and whose promoters, calculating that the duty would be removed from coal, organized it expressly to run out our coals from the New England market. The real object of the article is to aid in accomplishing what the Dominion Coal Co. is fighting for, and the method pursued is one that is likely to excite more or less suspicion, unless the public is prepared to admit that two hundred or more operators in Virginia and West Virginia are, as the Register claims, too deeply steeped in ignorance to know what will be the effect on their own business of a removal of this duty."

"This attack," he declared, "upon the intelligence of the coal operators and attempt to destroy their business, and to take the bread out of the mouths of West Virginia miners, starts out by admitting that, with few exceptions, the deluded operators are opposed to free coal, and that many of those among them who are democrats have resolved to forsake that party in the event that coal be placed upon the free list. Listen to the conciliatory tone it adopts to make the ignorant, erring democrats feel that they may yet hope to be forgiven."

"Men who have tens and hundreds of thousands of dollars," Mr. Miller read from the article alluded to, 'are not to be blamed for using all the means at their command to preserve their capital from losses. They would not be considered business men if they did not.' And here I would ask the Register, If free coal will not hurt, how can there be any losses? 'When party principle conflicts with personal gain or business interests,' the Register proceeds to admit, 'the former is quickly deserted, and, under the general rule that every man must look after himself or he will not be looked after, such action is not entirely blameworthy.'

"Following the foregoing apology for those who are asking and needing no apology comes the remarkable discovery that all business fears and apprehensions are

due to ignorance. This extraordinary theory is contrary to the opinion of Napoleon Bonaparte, who once declared that fear was the result of wisdom rather than of ignorance. But let us read on from the Register:

But as fear is almost always caused by ignorance, so in the case of the coal schedule the fear of free coal manifested by many West Virginia operators has been caused in a large measure, if not entirely, by lack of information as to the real situation or by misrepresentations made by republican partisans or those persons who might reap a benefit from a retention of the duty on coal.

"However," Mr. Miller here suggested, "if free coal will not hurt West Virginia, as the Register devotes six of its good columns of bad matter to the attempt to prove, then how can there be anyone who can reap a benefit from a retention of the duty? Consistency, thou art a jewel, a veritable electric light to illumine the befogged intellects of the West Virginia operators."

Mr. Miller then read from the Register as follows:

From the results of the Register's investigations, which are here given for the perusal of the public, it will be seen that all such fear on the part of West Virginia coal operators has been absolutely groundless; that Nova Scotia does not now and never can compete with the coal from our State, and that, instead of being injured by a reduction of tariff duties, our coal business will actually be benefited; so that life-long democrats who have been wavering in their belief may return to their party with a lively faith in its doctrines and principles, and with the assurance that their business will be as safe in the hands of the democracy as it has ever been, and that the Wilson bill, against which they have been induced to protest, is as favorable to the coal industry of our State as any measure which could be enacted at the present time.

"Alas, for the besotted ignorance of the coal men of West Virginia!

"The Register next proceeds, with an impertinence in sharp contrast with its conciliatory invitations to the erring coal men to return to the democratic fold, to finish its lecture by an array of figures which are for the most part misleading and fallacious, and of oracular utterances by two or three infallibly wise coal operators, the light of whose wisdom is lifted like the brazen serpent in this wilderness of ignorance."

"As to its figures, the cost of Cape Breton coal, run of mine, is given at \$1.80; of Pictou, run of mine, Acadia, \$2.25; Drummond, \$2.00; Spring Hill, run of mine, \$2.50. The Register argues that at these prices Nova Scotia coals cannot compete in New England with West Virginia coals."

"As it happens, however, I hold in my hand a recent report of the Dominion Coal Co., which now controls, by ownership or option, the principal coal mines in Nova Scotia, including those mentioned above, in which the cost of mining and laying down f. o. b. for shipment to New England is given at \$1.14 per ton, which includes the royalty of twelve and one-half cents paid to the British Crown and all railroad charges. Thus the Register's figures are, on an average, more than \$1.00 a ton out of line. But more of this anon."

"To bolster up its work in behalf of those who desire to rob Maryland and the Virginias of the New England market, the Register has interviews with D. C. Boyce and Capt. W. N. Page. The latter's company has a contract to supply the locomotives of the Chesapeake & Ohio Railway, and is therefore 'fixed,' tariff or no tariff. The views of these gentlemen, who are, as I understand, out-and-out free-traders, imbued with theoretical vagaries, fill about three columns, with conclusions based upon the misleading figures given above. A large part of Mr. Boyce's interview is devoted to an argument in favor of free ore, so that the iron industries may be transferred from the interior to the seaboard, and thus to provide a market in America for foreign ores to the exclusion of American ores."

"The only argument made by Captain Page in favor of free coal, except such as

are based on false premises as to cost of mining, etc., in Nova Scotia, is one predicated upon an exploded theory, namely, that the removal of Canadian duties on our coal will follow the free-coal feature of the Wilson bill. There is no earthly reason to expect Canada to admit American coal free. As a matter of fact, the removal of the Canadian duty will not increase our shipments to Ontario, because the Canadians are already buying all the American coal they can consume, and would, therefore, not be likely to buy any more, even if the Canadian duty on coal should be removed. The reason they buy coal from the United States is that the cost of the coal and transportation is less from the United States than it would be from Nova Scotia, and this difference is one of transportation entirely."

"The third witness brought on the stand by the Wheeling Register to convict the rest of the West Virginia coal operators of groping, grovelling ignorance is Mr. Evan Powell, manager of an English company—a gentleman bred and born in England, with free-trade education from infancy, and in no sense an American. He is not regarded as a practical coal operator, nor is he supposed to be well informed as to the needs of this country."

"Thus we have more than six columns of erroneous figures and allegations, and arguments based on false premises, in a great daily paper presumably devoted to the interests of the State of West Virginia. The only effect of this will be to temporarily mislead and deceive the people. The attack upon the intelligence of the coal operators of West Virginia in order to have any effect would require a far larger array of witnesses than the Register has produced, especially in view of the fact that the operators of Kentucky and Tennessee had on the very day preceding the appearance of the Register's article passed a resolution and memorial to the United States Senate endorsing the soundness of the position taken by their brethren in the two Virginias. I should say that, according to the Register, the coal men of Tennessee and Kentucky are also fools."

"All the world knows," Mr. Miller continued, "that the Dominion Coal Co. is making a desperate fight to capture the coal business of New England, and thereby deprive the two Virginias of a business which now amounts to millions of dollars annually."

Taking up the annual report of the Dominion Coal Co., Limited, for the year 1893, Mr. Miller gave the gist of its contents as follows:

"This company's coal was sold at prices yielding on the average \$1.423 per ton, and after paying all commercial expenses in marketing it yielded a net profit of twenty-seven and seven-tenths cents per ton, and in addition, steamships, barges and railways owned by the company and used in its coal operations, the splendid profit of \$103,267.65. From coal sold and profits from transportation the company's gross earnings were last year, 1893, \$334,430.66 on an output of 834,019 tons of coal. How delighted a West Virginia operator would be with such profits! From this they deduct \$87,721.22 for new machinery and wear and tear of plant. Next they deduct \$164,731.96 for dividends, interest on bonds and sinking fund, leaving a net profit for 'the future needs of the treasury' of \$51,977.48."

"Can any man," Mr. Miller asked, "reconcile himself to an acceptance of the theory that Nova Scotia coals, if admitted free of duty or at less than from sixty to seventy-five cents, will fail to hurt the steam-coal interests of the Appalachian regions? If so he must be ignorant indeed."

"If further evidence be needed it is furnished in the following extracts from the

prospectus of the Dominion Coal Co.:

Mr. Irving A. Stearns, manager of the coal companies of the Pennsylvania Railroad Co., visited Cape Breton and made an examination of the properties, rendering his report on September 20, 1892. Mr. Stearns stated in his report:

"The developments made show that the different seams are remarkably uniform in thickness and quality and unusually free from faults and disturbances of any kind, and are also very free from gas and water, both of which are very important factors in the cost of mining."

"As all of the coal is shipped in vessels and navigation is closed for several months during the year, these mines are compelled to suspend operations during that time, or to stock whatever coal is mined. This, of course, adds largely to the cost and materially increases the amount of slack coal when it is put in stock."

"If the mines were working steadily the average cost of mining of all the collieries referred to, exclusive of royalty and new improvements, should not exceed eighty cents per ton, and by the use of coal-cutting machinery could be still further reduced."

"The different mines and colliery plants are, as a whole, in good condition."

"If the different operations were consolidated considerable saving could be effected in various ways."

"It might be found expedient to abandon some of the shafts or slopes for hoisting purposes and take the coal through other openings in close proximity, thereby increasing the output and reducing the fixed charges. At present each of the operations have shops for doing the colliery work which could be consolidated at convenient points and the cost of this department very much reduced."

"A very important advantage in such a consolidation would be in opening new collieries, which could be located with a view to mining the greatest amount of coal with the smallest expenditure of money, thereby enabling one plant to do the work which, with different interests as at present, would require two or more."

"While there is no doubt that the consolidation of the different interests in the Cape Breton coal field would result in decreased cost of operation and a corresponding increase in the profits at present realized, these profits could be further increased by reducing the cost of mining if steady work prevailed throughout the year instead of about one-half the year as at present, as there are certain fixed charges that have to be met whether the mines are idle or working. To do this would necessitate a shipping point open at all times and a more extended and constant market."

E. Gilpin, Jr., inspector of mines of Nova Scotia, states the amount of available coal on these various properties as over 750,000,000 tons.

"Note the difference between the foregoing expert report and the following taken from the Register:

Mr. Ingall, the mining engineer of the survey, gives much interesting information regarding the methods employed in the mines. In the United States fully 70 per cent. of all the coal mines are developed by drifts, the cheapest of all methods. There are few shafts and those not deep, and not very many slope mines. In Nova Scotia the mines are nearly all very deep, from 750 to 1700 feet under the surface. Most of the important veins pitch from twenty to forty-five degrees. Nearly all are gas mines, in which safety lamps are required. Fire bosses must be employed and expensive devices made use of to provide against fire."

"Here is another interesting extract from the prospectus of the Dominion Coal Co., Limited:

Should the United States duty of seventy-five cents per ton be removed it seems evident that this company will find a large market on the New England seaboard, for which its position at tide-water would enable it to compete on advantageous terms."

It is estimated that it could put coal f. o. b. vessel at Louisburg for about \$1.00 a ton, probably cheaper than coal is shipped at any port in the world.

The accountant's statement shows that the companies whose books he examined have been making during the past five years an average profit of about forty cents per ton on their output not including various sources of revenue, such as profits of the company stores, revenue from railroads outside of coal traffic and profits of the steamship company. This profit per ton should be considerably increased by consolidation; but even this as a basis shows an annual profit for the combined present output (about 525,000) tons of all the mines except the one above mentioned, operated individually, of about \$330,000.

"However, if the Register and the authorities it quotes should apprise the directors of the Dominion Coal Co. of what a miserable investment they have made they may be persuaded to quit at once and to cease to waste their time and money. As charitably disposed volunteers

of advice to the misguided, it would be only consistent in them to hasten to pull the wool from the eyes of the deluded investors. It is true that New England men of means are proverbially sagacious and prudent in investigating costly properties and in ascertaining suitability of commodities for desired markets; nevertheless, if they can be made to know all that the Register and its witnesses can tell them, they may yet be saved from great loss and deep disappointment."

I think Mr. Miller has proven that the real ignoramuses are not the coal operators of West Virginia, but those who have asserted that free coal will not hurt or harm the business of those operators.

THOMAS P. GRASTY.

Coal in Louisiana.

Mr. D. M. Foster, of Lake Charles, has been investigating the coal found in Sabine parish and writes as follows to the MANUFACTURERS' RECORD:

"I have examined the coal in Sabine parish as to outcrops very thoroughly. I also dug a hole in a ravine and struck coal at twenty-three feet—found a four-foot seam of coal and brought some of the coal to Lake Charles. I tested it on a locomotive on the K. C. W. & G. Belt Railway line in the presence of J. H. Hammond, general manager, and others. The coal is pronounced good for steaming purposes. It makes very little smoke and burns freely, leaving white ashes. The outcrop in one place in Sabine parish is six feet thick. My opinion is that the main deposit is about seventy-five to 100 feet below the surface, as the coal is only exposed in the bottoms of deep creeks and ravines. Petroleum exudes from the ground a few miles from where the coal was found. There is also some good building stone and limestone found in the vicinity."

Packing Meat in the South.

The development of the meat-packing industry in the South of late has been very noticeable. The MANUFACTURERS' RECORD has described the plants erected at Baltimore, Nashville and Fort Worth, Texas, but this business is yet in its infancy, and is capable of great development. Commenting on the subject the Wilmington (N. C.) Star says:

"It will not be many years before large packing-houses will be established at central points in the South for the slaughtering of cattle and hogs. And this will stimulate the raising of cattle and hogs, for which the South possesses, as we have here stated, unrivalled advantages. Large slaughtering establishments have been erected at some point in Texas. Mr. John Cudahy, the millionaire packer of Chicago, has invested \$500,000 in a packing-house at Nashville, where 6000 hogs a day are slaughtered, and he expresses the opinion that Atlanta would be a good point for a much larger establishment. Men like Cudahy never talk at random, for when they talk business they mean what they say, and when they plant their money everybody knows they mean it."

Wise Men

read the advertising pages of the MANUFACTURERS' RECORD carefully because they are always sure to find something of value; it may be a special sale, or an opportunity for investment, or some new machinery, or some one looking for a location for a factory, or a thousand and one things advertised that may concern you. Every man ought to study newspapers, not simply glance over them, but examine in detail the MANUFACTURERS' RECORD, for instance, and he will be sure to find something that can be made profitable in his business. In its news columns and in its advertising pages he will find matter that may prove invaluable in his business operations.

The "Southern States" for March.

Never before have the glories of western North Carolina and northern Georgia been so brilliantly pictured in words as Mr. Jas. R. Randall, the poet, has done for the March number of the *Southern States* magazine, of Baltimore, Md. With a poet's inspiration Mr. Randall has produced a true "poem in prose," rich in poetic imagery, rhythmical, sumptuous in phraseology, exhibiting marvelous skill in phrasing, accurate in delineation and enriched with all the graces of the most polished diction and rhetoric. Under the touch of his glowing pen the transcendent charms of this enchanted and entrancing region for the first time have adequate portrayal.

In the same number of the *Southern States* Mr. R. H. Edmonds begins a series of articles on "The South Before the War." The first article in the series reveals some facts that will astonish even the Southern people themselves, and which Northern readers would find it hard to believe if every statement was not abundantly attested by official figures. It is shown, for example, that in the decade ending with 1860 the South constructed over 50 per cent. more miles of railroad than the New England and Middle States combined. The percentage of increase in railroad mileage in the South from 1850 to 1860 was 300 per cent. while in the New England and Middle States the gain was only about 100 per cent. From 1850 to 1860 the South spent over \$220,000,000 in railroad building, nearly all of this being Southern capital. The value of the flour and meal made by Southern mills increased from 1850 to 1860 \$20,000,000, the percentage of increase being much greater than in the country at large. The South's sawed and planed lumber product increased from \$10,000,000 in 1850 to \$20,890,000 in 1860, the gain being more than one-third as much as the gain in all other sections of the United States combined. The percentage of increase in iron-making from 1850 to 1860 was much larger than the percentage of increase in the whole country. In the manufacture of steam engines and machinery the gain in all of the country except the South was \$15,000,000, an increase of a little less than 40 per cent., while the gain in the South alone was \$4,200,000, an increase during the ten years of over 200 per cent. The number of factories in the South in 1860 was 24,590, and the capital invested in them was \$175,100,000. The article in this number is devoted to manufactures. The next in the series will deal with agricultural products, in which the showing, it is promised, will be even more remarkable than in manufactures.

Under the title, "An American Italy," Mr. Erwin Ledward describes a thrifty Italian colony that located some years ago near Mobile, Ala., and has been engaged in fruit and grape culture and general agricultural pursuits.

The present instalment of the letters from Northern and Western farmers who have moved to the South includes one from the fruit belt of middle Georgia, one from a former citizen of Warrensburg, N. Y., now living in Moore county, N. C., one from a farmer who moved to Southern Pines, N. C., from New Hampshire, and who writes of the fruit-growing industry of Southern Pines, another from a fruit-growing district of eastern Texas, and another from Arkansas, written by a farmer who moved from Michigan, one from Abbeville, Ga., answering at length a great number of letters of inquiry received by the writer since the publication of a former letter in the *Southern States*. Following these letters from farmers are several pages of miscellaneous items about Southern farms and farmers. In this number Hon. Clark Bell, editor of the *Medico-Legal Journal*, of New York, one of the party of

editors of medical journals who recently made a tour through the south Atlantic States, contributes a paper on the fruit-growing possibilities of the south Atlantic seaboard. Mr. Bell is an expert in fruit culture, and he says that North Carolina and Georgia may be regarded as a paradise for fruit-growers.

The editorial pages, the departments of immigration notes, real estate notes, notes of progress and general notes are much more than usually full and interesting.

A very striking letter from an Englishman is published, in which it is shown that the only barrier to a large emigration of gardeners, farmers, small manufacturers, etc., from England to the Southern States is an entire lack of information about the South. The writer suggests the creation of bureaus of information and immigration by the Southern States or Southern railroads, in London, and his letter would seem to demonstrate that very large results would follow such a step.

Literary Notes.

VOLUME I of Funk & Wagnall's Standard Dictionary of the English Language, recently issued, is a work which will attract the attention of philologists the world over. As the publishers announce, it is without doubt the most complete dictionary of the English language yet produced. The amount of research and revision attached to a publication of such magnitude is almost limitless. It must be the result of collaboration by specialists in every vocation and profession known to man, while to bring it up to the plane of modern progress the services of the most advanced thinkers must be enlisted. Taking the department of electricity alone, such wonderful progress has been made in five years that the dictionary of 1888 or even 1890 gives the student only the rudiments of this science, and lacks the essential information of some of the greatest discoveries of the age. The publishers have men and women whose names are familiar in every household to prepare and compile the Standard Dictionary. There are nearly 250 specialists, whose efforts are supervised by I. K. Funk, editor-in-chief; F. A. March, consulting editor; D. S. Gregory, managing editor, and John Champlin, Rossiter Johnson and Arthur E. Bostwick, associate editors. Members of the faculties of prominent American and European colleges are members of the editorial staff, including Yale, Amherst, Johns Hopkins, University of Chicago and University of Pennsylvania. The total number of words in the vocabulary is nearly 300,000 in both volumes, nearly 75,000 more, it is said, than in any other English dictionary yet published. The total cost of producing the work complete will be nearly \$1,000,000. In the arrangement and illustration the most modern ideas have been utilized, including the comparatively new art of printing in colors. On every page the reader finds some new feature to admire, either in completeness of definition, the arrangement of explanation or the liberal quotations and references everywhere introduced.

THE name of Bancroft will always be connected with great historical work. Consequently the announcement that Hubert Howe Bancroft has given the literary world a new book entitled "Resources and Development of Mexico" will be received with genuine pleasure. The book was written at the request of President Diaz, of Mexico, who is a warm personal friend of the historian. Through the President's efforts it was arranged that Mr. Bancroft, in person or by his agents, should carefully examine every part of the republic, at the same time enlisting the co-operation of governors of states and the foremost men everywhere. This was done and the present volume is the result. A mass of valuable material was collected, from which a

dozen good books might have been written, but the author limited his space rigidly to a single volume, which makes his work of far greater practical value than it would be if more extended. Great pains was taken with the plan, arrangement of material, analysis and elucidation; also with the index, which is more than usually full and comprehensive, thus adding greatly to the usefulness of the work. As might be expected, it is an authority on the subjects of which it treats, and is very timely in view of the growing interest in Mexico's progress. The Bancroft Co., of San Francisco, is the publisher.

"BENNER'S PROPHECIES," ninth edition, with forecast for 1894. Prophecies in future ups and downs in prices. What years to make money on pig iron, hogs, corn and provisions. By Samuel Benner, an Ohio farmer. Ninth edition, giving the results for 1876-1888, and "Prophecies" to 1893, and forecast for 1894. 24 mo., cloth \$1.00, Robert Clarke & Co., publishers, Cincinnati, Ohio.

MR. JAS. A. BISHOP, of Jacksonville, Fla., writes the MANUFACTURERS' RECORD: "The Bishop Fibre Co. is organized under the laws of West Virginia to manufacture fibres from palmetto. It has \$150,000 paid capital. We are to make both mattress fibre and brush fibre, on which we own the exclusive patents both as to process and machinery. The organizers are as follows: Gen. Grinnel Burt, of New York; Gen. James S. Negley, of New Jersey; Mr. J. C. Fawcett, of Louisville, Ky.; Mr. J. Appleton, of New York, and Mr. James A. Bishop, of Jacksonville, Fla. The officers are as follows: James A. Bishop, president; General Burt, treasurer, and General Negley, vice-president and secretary. The company now owns a large plant in Jacksonville, which has been running for about two years. It is now putting up a factory at Daytona with capacity to make twenty tons mattress fibre per day, and will in the near future put up additional plants over the State. This is a comparatively new industry, but one of considerable merit and worth. The New York office is 136 Liberty street.

A NORTH CAROLINA industry that has met with success is that of the Pomona Terra Cotta Co. at Pomona, where the company has a plant which represents an investment of about \$30,000. About fifty hands are employed. The output consists of all kinds of piping from an inch and a half to twenty-four-inch sewer pipe, also superior fire-brick and ornamental hearth brick. Improvements are being continually made, the past summer having seen an addition of machinery costing \$8000 and a branch railroad to the Winston Railroad is now being constructed. Mr. J. Van Lindley is president of the company.

THE city of Hot Springs, Ark., supplies the world with the oilstones used by those who use edged tools. The rock from which these oilstones are manufactured is technically known as novaculite, and the supply of this material here is inexhaustible. It is known to the commercial world as Washita stone, and is shipped in carload lots from the quarries of Hot Springs, Ark., to New York to be cut up into stones of various sizes, properly blocked and sent out to the trade.

REPRESENTATIVES of Mobile, Montgomery, Birmingham and other Alabama commercial organizations have called a convention to be held in Birmingham on April 24 to discuss immigration, the Nicaragua Canal and other matters of public interest.

THE citizens of St. Augustine, Fla., are about to adopt the Alachua county soft rock for paving their streets, and are getting prices and cost of same from Gainesville contractors.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department, on page 92.]

VANDERBILTS AND ROCKEFELLERS

Planning to Secure Southern Railway Lines—Report of a Big Deal.

[Special Dispatch to MANUFACTURERS' RECORD.]

LOUISVILLE, KY., March 7.

It is reported here on good authority that the Vanderbilts and Rockefellers have entered into a combination to control the Chesapeake & Ohio, Missouri, Kansas & Texas, Louisville Southern and several smaller lines, which will give them practical control of the export business of New-Port News and Galveston. It is stated that about \$7,000,000 is to be invested in the several lines to secure control. The Vanderbilts now hold a large share of Chesapeake & Ohio stock.

The New Terminal Plan.

The modified plan for reorganizing the finances of the Richmond Terminal system embraces about 4600 miles of road, excluding the Memphis & Charleston and a few small roads. The amounts outstanding after reorganization are estimated at \$101,000,000 bonds, \$48,000,000 preferred stock and \$120,000,000 common stock. The fixed charges are scaled down to \$4,100,000 in 1894 and \$4,700,000 in 1895. In 1896 and afterward they are restored to their level under the original plan. This temporary scaling down of fixed charges is done by requiring various security holders to fund coupons on the new bonds accruing to them, and in most instances to take preferred stock for the coupons funded. Among those called upon are Richmond Terminal 6s, the Richmond & Danville 5s, Northwestern North Carolina, the Oxford & Clarksville, the Clarksville & North Carolina, the Charlotte, Columbia & Augusta 6s, and the East Tennessee, Virginia & Georgia general mortgage, and the first extension mortgage. The East Tennessee, Virginia & Georgia improvement and equipment mortgage, which ranks higher than the foregoing, gets bonds for the amount of its new coupons and for the interest which was to be paid to it in cash. The Richmond & Danville debenture 6s, which were not disturbed in the original plan, now surrender the coupons from October 1, 1892, to October 1, 1895, taking for each coupon \$25.00 in bonds. The par of the coupons is \$30.00, and in consideration of this reduction the committee agrees to make the debenture mortgage, which is now an income mortgage at 6 per cent., a fixed charge at 5 per cent. Charlotte, Columbia & Augusta seconds fund three coupons into preferred stock.

The assessments are changed to \$10.00 on Richmond Terminal stock, \$7.20 on East Tennessee, Virginia & Georgia common stock, but the assessment on East Tennessee, Virginia & Georgia first and second preferred stock remains unchanged. Instead of giving only preferred stock for the amount of the assessments, as was the case in the old plan, the committee says that it recognizes the inexpediency under present conditions of calling for new money on a basis adopted ten months ago, and it gives bonds for one-quarter of the new assessment, and preferred stock for three-quarters.

Of the remaining assessments on stock under the new plan, \$1.88 per share on Richmond Terminal, \$1.95 on East Tennessee common, \$1.50 on East Tennessee second preferred and seventy-five cents on East Tennessee first preferred is called for March 20. Oxford & Clarksville, Clarksville & North Carolina, Northwestern North Carolina and Danville & Western bonds (which are the only ones on which a time limit has not heretofore been fixed)

must be deposited by the same date. The committee makes a further advance for interest on Georgia Pacific firsts, Columbia & Greenville firsts and Louisville Southern bonds, the same as was done last July. The Richmond, York River & Chesapeake securities will probably be allowed 5 per cent. interest on first and 4 per cent. on second mortgage.

It became necessary to modify the original plan to take care of \$4,500,000 additional debt which has accumulated since the first plan was considered.

As far as can be learned, there is little dissent from the new plan among those who have examined it. Gen. Samuel Thomas and H. C. Fahnestock, of New York, have approved of it. A representative of the MANUFACTURERS' RECORD has made inquiries of the Baltimore bondholders' committee, who state that it will not be opposed. One or two security holders have consulted attorneys to obtain an opinion as to the legality of scaling the interest, but it is not anticipated that any action will be taken by them.

A Report Denied.

Regarding the report that the Pennsylvania Company intends to build its extension into West Virginia under the title of the Brownsville & State Line, or, as it is more generally known, the Pittsburg, Virginia & Charleston, the MANUFACTURERS' RECORD has received the following:

PENNSYLVANIA RAILROAD CO.

PHILADELPHIA, PA., March 3.

Editor Manufacturers' Record:

In reference to this company commencing construction work on the extension of the Pittsburg, Virginia & Charleston Railway at an early date, I beg to say that the company will not commence any construction work until there is some improvement in financial affairs. SAMUEL REA,

Assistant to President.

Louisville & Nashville and South Carolina.

The statement in the MANUFACTURERS' RECORD some weeks ago that the Louisville & Nashville would try to obtain an entrance into Charleston, S. C., is corroborated by the following New York dispatch: "Meetings of the Louisville & Nashville directors are being held daily, and among other matters under discussion is the plan to secure control of the South Carolina road at the forthcoming foreclosure sale. The Louisville & Nashville it is understood holds a majority of the bonds."

No Purchase Made.

The latest report in connection with the Florida Central & Peninsular is that that company has purchased the branch of the Florida Southern to Charlotte Harbor, Fla. Concerning this statement President Duval writes:

"I have to advise you that there is no truth in the report that this company has purchased the Charlotte Harbor division of the Florida Southern Railroad."

Two Lines Withdraw.

The Louisville & Nashville and the Nashville, Chattanooga & St. Louis roads have withdrawn from the Southern Railway and Steamship Association, and the latter's efforts to keep them in membership have been unavailing. The result of this action has been extensive rate-cutting on cotton and other freights, and the indications are that the Louisville & Nashville will make further sweeping reductions in order to secure the bulk of the business.

Another Washington-Baltimore Line.

The Baltimore & Washington Transit Co. is the name of a company which proposes to build a line of electric road between Baltimore and Washington by way of Catonsville, Ellicott City and Sandy

Springs. It will enter Baltimore at Edmondson avenue and the District of Columbia near the Sargent road. The company has \$1,000,000 capital, and includes Alexander Brown and Samuel E. George, of Baltimore, and George Yakel, of Baltimore county. One of the company informs a representative of the MANUFACTURERS' RECORD that the new road will be built whether the boulevard line is constructed or not.

Bicycle Railway in Washington.

The company which is endeavoring to secure permission from Congress to build an electric road in Washington and its suburbs proposes to employ the Brott "bicycle" system, by which it is claimed that a speed of from 100 to 200 miles can be easily attained. The structure is built so that the cars are propelled by wheels running along the rail under the centre instead of the sides of the car, as in the ordinary method of locomotion. To prevent the cars from falling sideways or being influenced by lateral motion the structure supporting the track is built up in a semi-circular form for a distance of half the height of the cars, thus preventing them from leaving the track and supporting the current wires, from which motive power is obtained. Two rails are also used, upon which small wheels extending from the sides of the car operate.

In a letter to the MANUFACTURERS' RECORD, President George F. Brott, of the company, says: "We have an application for a charter pending to build a line in and around this city. In details of construction it will differ some from our long-distance rapid-transit plans. We have no fear of trouble in arranging for necessary capital when we get to that point."

Railroad Notes.

ANOTHER large shipment of bananas has been made to Denver, Col., and Western points by way of the Santa Fe system. The bananas were received from the steamship at Galveston, and filled fourteen cars.

THE Associated Railways of Virginia and the Carolinas and Pennsylvania Railroad have announced by circular the appointment of F. W. Parsons as general Eastern agent of the Atlantic Coast Despatch, Seaboard Despatch and Richmond & Danville Despatch lines, with office at 205 East German street, Baltimore.

THE Lynchburg & Rivermont Street Railroad Co. has purchased Rivermont Park at Lynchburg, Va., paying \$7000 for the property. It is the intention of the company to make a number of improvements in the park.

THE Baltimore & Northern Railroad Co. has elected the following named directors: William Gilmor, M. H. Houseman, Fridge Murdoch, G. O. Wilson, S. Johnson Poe, Solomon Frank and John Henry Miller.

W. H. LUCAS has been appointed Florida passenger agent for the Georgia Southern & Florida, with headquarters at Jacksonville.

J. G. MANN has been appointed assistant general passenger agent of the Mobile & Ohio road.

THE annual report of the Baltimore Traction Co. for 1893 shows that the gross earnings of the company were \$1,062,884.82 and operating expenses \$689,317.73, leaving net earnings of \$373,567.09. Fixed charges, interest on bonds, taxes and insurance amounted to \$355,202.10. This amount subtracted from \$373,567.09 leaves a balance of \$18,364.99. During the year the company constructed 22.08 miles of track. The track mileage owned by the company is 78.47.

THE People's Bank of Kentucky, which is closing up its affairs, will make its last payment to stockholders this month.

FINANCIAL NEWS.

Bondholders Have Faith in It.

A dispatch from Atlanta announces that a majority of the bondholders have agreed to a plan for reorganizing the finances of the Atlanta Consolidated Street Railway Co., and that the courts will not be called upon to take charge of the company's affairs. By the plan of reorganization the bondholders agree to accept 3 per cent. annual interest on the securities for the next two years, and 5 per cent. thereafter until maturity. The floating debt now amounts to \$500,000, and by this scaling of interest it is believed that the debt can be disposed of. The reduction in interest will save the company \$120,000 on fixed charges in the next two years.

New Financial Institutions.

The proposed bank at Abbeville, La., it is reported, is to be a State bank and is to have \$15,000 capital, instead of \$50,000, as first reported.

Messrs. Lane & Bentley, of Valdosta, Ga., are considering the idea of establishing a bank at Lake City, Fla., with \$50,000 capital.

The First National Bank at Brunswick, Ga., has been reorganized with the following named officers: H. W. Reed, president; C. Downing, Jr., vice-president; H. W. Reed, C. Downing, W. E. Kay, W. G. Brantley, W. B. Burroughs, Rosenda Tarras, of Brunswick, and H. H. Tift, of Tifton, directors.

The Dime Loan Association has been organized at Savannah, Ga., with C. S. Wood, president, and W. Harden, treasurer.

The American Union Fire, Life & Industrial Insurance Co. has been chartered at Nashville, Tenn., with J. M. Lindsley, C. P. Watson and others as incorporators.

New Bond and Stock Issues.

The city treasurer at Norfolk, Va., will receive bids for \$20,000 municipal 5 per cent. bonds until March 15. They are due in 1924. Address C. A. Nash, clerk.

Interest and Dividends.

The Krise Banking Co., at Lynchburg, Va., recently paid out \$52,000 in one day to stockholders of two concerns, the Bon-sack Machine Co. and the Lynchburg Loan Association.

The Planters' Bank at Americus, Ga., has declared a dividend of 10 per cent. for the year's business.

The success of the Progress, of Charlottesville, Va., is shown by the declaration of a 6 per cent. semi-annual dividend to stockholders of the publishing company.

The Tallassee Manufacturing Co., of Tallassee, Ala., has declared a dividend of 7 per cent. The company operates a cotton mill at the place named.

Failures and Suspensions.

John H. Silliman has been appointed receiver of the Edison Illuminating Co. at Palestine, Texas.

The affairs of A. Joseph, a dry-goods merchant at Milledgeville, Ga., have been placed in the hands of F. B. Mapp, receiver. Assets are estimated at double the liabilities.

Thomas M. Smedes has been appointed receiver of the Hill City Electric Light Co. at Vicksburg, Miss.

A dispatch from Louisville, Ky., announces that the Columbian Fire Insurance Co. with \$200,000 capital has been declared insolvent.

A dispatch from Lowndesville, S. C., announces that the Bank of Lowndesville has suspended. It was a State institution with \$20,000 capital.

SOUTHERN TEXTILE INTERESTS.

[A complete record of new textile enterprises in the South will be found in the Construction Department, on pages 91 and 92.]

Export Markets for Southern Cotton Goods.

[Special Cor. MANUFACTURERS' RECORD.]
NEW YORK, March 3.

Mr. F. E. Halberstadt, the principal foreign agent of the Cone Export & Commission Co., of this city, which handles the output of many Southern mills, has just returned from an extensive trip through South America and Europe in the interest of his house. Mr. Halberstadt is intimately acquainted with the foreign trade of this country in cottons, and a residence of many years in South America has given him exceptional opportunities for knowing just what has been done. His recent tour, comprising the principal cities of the eastern coast of South America and the principal cities of Europe, has put him in position to judge accurately of the possibilities for the future.

In an interview with a representative of the MANUFACTURERS' RECORD a day or two ago he said:

"I left here the first of last August and visited the principal cities of Brazil except Rio de Janeiro, which I passed by on account of the war; Maranhao, Ceara, Pernambuco, Bahia, Montevideo, Buenos Ayres and other cities of importance. Up to a recent date only Eastern commission houses have been represented in these places. Plaids, cottonades, chevrons and chambrays were all sold from Manchester, Eng. But the American trade has now a vast advantage over other countries on account of the reciprocity laws existing with most of those states, by virtue of which we have in our favor 25 per cent. duty. Then it is our practice to make up goods as desired, both as to quantity and pattern. This, however, has been done only recently, and is a reversal of the policy heretofore prevailing amongst our manufacturers.

"Another drawback which has existed until recently is that our manufacturers would not make small orders of one pattern, while the English would make as small a quantity as 200 or 300 yards of goods of one kind. As the trade in these countries is in its infancy, this willingness on the part of our English competitors to cater to the wants of their customers enabled them to almost exclude us from the field.

"The mills controlled by us, embracing many of the principal ones in the South, have inaugurated a change of policy, and this, coupled with the fact that we have advantages in duty, as I said above, on account of our reciprocity laws, will, I am confident, enable us before a great while to almost entirely control the trade in cotton goods in these countries.

"From South America I went to Paris, then to London and Manchester. The buyers for the west coast of South America and all of East India, China and Africa are to be found in those cities. I canvassed them thoroughly, with excellent results, though in many cases it was the first time they had ever been approached by representatives of American manufacturers.

"The result of my trip has been the securing of a large trade. To retain this we will be obliged to keep men traveling in South America, and to retain agents in the cities of Europe. Of course this will entail expense, but it will repay us amply in a short while. In order to facilitate the results we seek, Southern mills ought to fix special prices for this foreign trade. Very cheap plaids are not wanted, but those of a middle grade of hard finish and showy patterns.

"I want to say a word about the packing of goods for export. As a rule, goods are packed in this country for the foreign trade just as they are for the domestic

trade; hence they arrive at their destination in a damaged state. Our company has paid especial attention to this item, and this has given us an advantage which others should not fail to understand if they want the trade of those countries.

"You ask me what the prospects are. Beyond what I have said I can only add that I think we have a most excellent outlook for our Southern goods. In a few years I expect to see them in use almost exclusively in the South American markets."

Editor Manufacturers' Record:

A glance over the Southern industrial situation, we believe, will convince the observer that this section of the country presents unusual opportunities for the establishment of plants for knitting cotton into wearing apparel. This branch of textile work has not kept up with the establishment of mills for turning the raw material into yarns, and today, while we find that the number of the latter is steadily and rapidly increasing, but few knitting factories are contemplated.

We note, however, with satisfaction the evident disposition of some enterprising men who are at the head of the factories in the South to introduce the knitting machine and to take up this profitable branch of textile manufacturing, and trust we shall soon see the cotton made into hosiery and underwear, and the knitting industry take its proper place in this undeveloped field. There is probably no branch of textile business that affords a broader field for work, and possibly no industry that can be developed with less expense, with a certainty of a large percentage of profit, than the knitting business, and the mills in the South that are looking for an outlet for the yarns that they make can do no better than to make their yarns into hosiery and underwear.

At the earnest solicitation of the managers of the exposition held in Augusta, Ga., Messrs. Nye & Tredeick, manufacturers of knitting machinery in the city of Philadelphia, made the first exhibition of knitting machines in the South.

This exhibition, while proving an excellent advertisement for the firm named, furnished a valuable object-lesson to the thousands who, until that time, had no conception of the perfection which has been attained in the construction of these machines. In our opinion it seems the height of folly to send outside of the South for knit underwear, hosiery, etc., when it can be made right at home, and the freights, middlemen's profits, and agents' commissions saved to the buyer and maker.

The Metallic Drawing Roll.

During the past year the new patent metallic drawing roll for cotton mills owned and manufactured by the Metallic Drawing Roll Co., of Indian Orchard, Mass., has forced attention and gained a constantly increasing hold on the trade in the face of dull business and a determination by manufacturers to economize. An invention which has done this must certainly have paramount features of advantage, and this determination for economy led to the introduction of the metallic roll in many mills during the summer. The principal features of the metallic drawing roll were described in the MANUFACTURERS' RECORD last spring, and the mill trade, a most conservative one, too, is familiar with this new system of drawing rolls, said by the company to be the "most important improvement in cotton spinning since Arkwright's time." Some of the leading mills of the country, both North and South, have adopted these drawing rolls, and sufficient time has now elapsed since their introduction and enough experi-

ence been gained with them to demonstrate the correctness of the company's claims. For further particulars regarding this invention, names of mills in which it is in use and other information address the Metallic Drawing Roll Co., of Indian Orchard, Mass.

Notes.

THE stockholders of the Cherryville (N. C.) Manufacturing Co. held a meeting on February 15, and the reports of the officers were submitted and voted satisfactory. Mr. David Mauner was re-elected president, and J. M. Rhodes, secretary.

THE Anniston (Ala.) Cordage Co. has received the new looms recently ordered and is placing them in position. These looms are made expressly for manufacturing cotton carpeting, and the company has good orders already on hand.

THE new mill at Union, S. C., is being prepared for operations very rapidly, and will soon be ready to start.

THE Tallassee Falls Manufacturing Co. held its annual meeting at Montgomery, Ala., on February 28, and directors were elected as follows: Emanuel Lehman, Meyer Lehman, J. S. Turner, of New York; Jno. W. Durr, Jos. Goetter, Sigmund Roman, W. H. McConn, Jr., of Montgomery; A. J. Milstead, of Tallassee, and Maurice Stern, of New Orleans. The directors elected Mr. Durr, president; Mr. McConn, secretary, and Mr. Roman, treasurer. A dividend of 7 per cent. was declared. The company's mill is at Tallassee.

THE movement at Abbeville, S. C., for a cotton mill is assuming shape, the business men of the town having taken the matter in hand. Last week they held a meeting and appointed a committee to solicit subscriptions for a stock company. Messrs. J. F. Lyon, J. C. Klugh, R. M. Hill, W. J. Smith and others are interested.

THE Commonwealth Cotton Mill at Durham, N. C., has resumed operations after a shut-down of several months, and will run extra time to fill orders.

THE Southern Finishing Works at Greensboro, N. C., are running extra time to fill orders.

THE Pearl Cotton Mills, recently completed, at Durham, N. C., will commence operations about April 1, running 10,000 spindles.

THE Fork Shoals (S. C.) Cotton Mill will be put in operation at once by Messrs. Smith & Bramlett, who have obtained a lease on it from the owner, J. P. Latimer.

THE Kennon Manufacturing Co., of Brunswick, Ga., will resume operations during the month with an increase of 4000 spindles and employing 100 hands.

AT the regular annual meeting of stockholders in the Chewalla Cotton Mills, of Eufaula, Ala., held on February 20 for the purpose of electing a board of seven directors, the following were chosen: J. P. Fay, E. B. Young, J. L. Pitts, G. L. Comer, George H. Dent, H. Schloss and R. A. Ballowe. A meeting of the new board of directors was held on the following day and elected J. P. Fay, president; E. B. Young, vice-president, and C. P. Roberts, secretary and treasurer, and appointed a committee to begin correspondence with manufacturers of machinery with a view to purchasing and equipping the mill at once.

In Good Condition.

THE annual meeting of the Old Dominion Steamship Co., held in New York, showed that the year's business has been very satisfactory. Two new vessels are to be added to the fleet. The officers elected were: H. A. Bourne, president; W. E. Guirellaudeu, vice-president; R. C. Hoffman, F. J. Kimball, C. P. Huntington, C. P. Fisher, Wm. Rowland, C. C. Stockley, John W. Causey, directors, each to serve one year from date.

Protecting American Shipping.

Probably no man in this country, possibly no man in the world, is better qualified to discuss American shipping interests than Hon. William W. Bates, late United States commissioner of navigation. It has been his life-work, so to speak, and he has had the best opportunities for study and comparison of the subject in all its features; consequently, the work on the "American Marine," recently published by Houghton, Mifflin & Co., of which he is the author, will command attention at once as being an authority of its kind. The book contains nearly 500 pages, and is without parallel as an exhaustive argument for the upbuilding and sustaining of home commerce carriers. Even a brief review of it would require the writing of another book, and we can only bring out one or two of its features in this article. In chapter 2 Mr. Bates deals with the "National Economy of Shipping of Our Own," bringing out the fact that ocean freightage or freight money is a product of a merchant marine. When we ship a cargo abroad in a foreign bottom this freightage goes to foreign credit. When we import cargoes in foreign ships we import also the freightage and must pay abroad for both the merchandise and carriage. Here is a point which, while generally acknowledged, is seldom studied. Supposing the freight to be only enough to pay the expense of wages and repairs to the vessel, the fact that the money comes to this country for use and circulation is a factor in itself of the highest importance.

The author illustrates the national use of merchant shipping in this way: There are two cargoes in New York and two in Liverpool, each valued at \$100,000. The freightage will amount to the same sum both ways. An American ship takes one of the New York cargoes to Liverpool and returns with one of the latter cargoes. A British vessel carries the other two cargoes. He estimates the exchange of values as equal, each \$250,000. If one cargo at New York and one cargo at Liverpool are carried in British bottoms, he estimates total amount, including value of cargo, freight, insurance, etc., will be \$300,000, all of which goes to England, making an adverse balance of trade towards America of \$100,000.

In regard to comparison of foreign tonnage, etc., Mr. Bates gives a table showing that the proportion of American tonnage in our import trade was 90.4 per cent. from 1795 to 1807, 84.5 per cent. from 1847 to 1860, and 21.5 per cent. from 1878 to 1890. The export tonnage for the same periods was 87.4, 79.6 and 13.8. In 1891 ocean transportation, estimated at 15 per cent. of the value carried, amounted to \$248,481,121, of which 87½ per cent. went to foreigners. Adding the passenger and mail business, these figures reach \$312,500,000. Of the latter traffic United States vessels obtained but 9 per cent. The average oat crop of the country from 1880 to 1891 was valued at \$184,610,237 annually. We paid \$6,000,000 more than this sum for freight each year to foreign vessel owners.

In the last part of the work Mr. Bates makes a strong argument for a department of commerce, pointing out the fact that we have a war department, with no wars and but the nucleus of an army, and other branches of government, all of which are exceeded in importance by our commerce with other countries.

Demand for Virginia Real Estate.

J. Thompson Brown & Co., of Richmond, state that they are receiving many inquiries from parties desiring to locate in Virginia. They are now negotiating with people in Ohio, Michigan, New York, Minnesota, Illinois, Indiana, Colorado, Pennsylvania, Wisconsin and Kansas. One party represents a colony of fifty families who wish to come South.

SPECIAL TEXTILE SUPPLEMENT.

COTTON MANUFACTURING.

The Possibilities of Southern Development.

The world has about 85,000,000 spindles, representing an investment of probably upwards of \$2,000,000,000. Of this vast industry the United States have a little over one-fifth in capital invested, or over \$400,000,000, and less than one-fifth in the number of spindles, or 15,000,000. Though the South produces over 60 per cent. of all the world's cotton crop, it has only about one-thirtieth of the total cotton-manufacturing business. It furnishes the raw material for more than one-half of all the spindles of the world. For 100 years the South has been raising the cotton, shipping it to New England and to Europe, and permitting the manufacturers of those countries to grow rich on turning it into the finished product. Of all the vast wealth of material with which the South has been so abundantly blessed, there is no other, not even iron, equalling cotton in its possibilities of wealth creation for this section. The \$300,000,000 a year which the cotton crop brings to the South would be trebled if we could manufacture at home all the cotton which we now produce. To do this would require an investment of upwards of \$1,200,000,000. Employment would be furnished to hundreds of thousands of hands, and the vast wealth created in New England and Old England by the production of cotton goods would be more than duplicated in the South. It is needless to say that the South's advantages for cotton production are not more pre-eminent than its advantages for cotton manufacturing. Here where the cotton is raised nature has furnished every requisite for its manufacture at the lowest possible cost; here is found the combination of climate and of the cheapest power, both steam and water, that the world affords, and of an abundant supply of labor easily trained, and which, by reason of the low cost of living, can always be had at a lower cost than laborers in other sections, where living must of necessity be more expensive. In the Carolinas and Georgia and in some of the other States there are water-powers almost without limit that can be utilized at the lowest possible cost, while in the States where water-powers are less abundant coal can be had at a price almost as satisfactory as water-power. We not only have in the South the raw material without the cost of transportation and other expenses necessary before the cotton can reach Northern or European mills, but we have the natural advantages for cotton mills greater than any other country. It is no longer a question as to whether the South can develop its cotton-manufacturing business. A few years ago our New England friends persistently claimed that the South would never become a great cotton-manufacturing centre. They had many reasons for the faith that was in them. Some said that the South lacked energy; some said that its people were not adapted either to the management of cotton mills or to become skilled laborers in the mills; some said that we had not the capital, and that New England capital would never leave its own section to go into Southern mills; some said that while we might in time produce the coarse goods, we would never in the South produce the finer product. Reasons without end were found, but the logic of events has year after year proved that all the arguments of our New England friends were without foundation. The South has not only developed its cotton manufacturing with amazing rapidity, but it has put its own money into mills, it has managed them, it has furnished the labor for them, it has pushed its goods into all markets, and practically monopolized the coarse goods business. It has turned its attention to the finer goods, and its success in that line is just as assured as its success in coarse goods ever was. At last New England begins to see that southward the star of cotton manufacturing takes its way, and a number of the oldest mills of that section are preparing to save their trade by building new mills in the South. Despite the general depression in business interests since the late financial troubles and the uncertainty regarding the tariff, Southern cotton-manufacturing interests are attracting great attention in Northern financial circles. It is almost universally conceded that the future growth of this industry is in the South; that the progress of the past is but an indication of what the future will bring forth. It has been said that a nation's civilization is measured by its consumption of iron and coal, but it may with equal appropriateness be claimed that the world's civilization is measured by its consumption of cotton. Advancing civilization and increasing prosperity lay open wider markets for the Southern cotton goods. The high-water mark of 9,000,000 bales reached a few years ago will not by any means meet the requirements of the world a few years hence. When prosperity once more

comes to all countries (for all countries throughout the world are now suffering) the demand for cotton goods will necessitate larger crops than we have yet produced, but while increasing our production, as we are bound to do, the South is increasing its manufacturing so rapidly that much of this gain will be shipped away in the form of finished product rather than in the raw state. In the last twenty years cotton has brought into the South nearly \$6,500,000,000. Much of this enormous sum has gone West and North to pay for foodstuffs and manufactured goods. Had it remained in the South the wealth of this section would be vastly greater than it is today. With increased attention given to the production of foodstuffs at home, as is now being done, with the great growth in manufacturing interests that is going on, the South is becoming more independent of other sections in these lines, and will not only retain at home the millions of dollars that have annually gone West for corn and bacon, but it will add to this the millions that are being received from other sections for its early fruits and vegetables. Cotton, the foundation crop of Southern agriculture, is also the foundation of a manufacturing industry which will add more wealth to the South than any other one industry. The growth has been rapid of late years, but the future promises to be far more rapid.

COTTON MANUFACTURING SOUTH.

The Remarkable Growth of this Industry.

The progress that has been made in the development of cotton manufacturing in the South, even during the general business depression of the last twelve months, is the strongest testimony that could be given to the unequalled advantages of this section for this industry. In 1880 the South had 161 cotton mills, with 667,854 spindles. By 1890 they had increased in number to 255 mills, with 1,766,553 spindles. In the next three years there was a rapid gain, and the number of spindles rose to 2,774,087 by January, 1893. During 1893 cotton-mill building continued active, while many old mills increased their capacity by putting in additional machinery, and, as shown by the detailed list given below, the South now has 405 mills with 2,774,087 spindles and 62,427 looms, including a few mills under construction and sufficiently far advanced to have determined upon the number of their spindles. In addition to this the mills projected, but upon which construction work has not yet commenced, will have between 50,000 and 75,000 spindles. The increase in spindles last year was over 200,000, and at this rate only the South would have about 5,000,000 spindles ten years hence, but the probability is that these figures will be reached before 1900, or within six years.

As shown by the tables given below, North Carolina leads in the number of spindles, with 660,000, while South Carolina leads in looms, with 16,200. North Carolina has the largest number of mills, but as the majority of them are small, the aggregate number of their spindles exceeds South Carolina's by only 34,000. Present indications point to a sufficiently rapid growth in South Carolina to overcome this and to place that State in the lead in spindles, as well as in looms, within a year or two. Georgia comes third on the list, with 556,000 spindles.

The following table shows the growth of this industry by States:

	June, 1880.			June, 1890.			January, 1893.		
	Mills.	Spindles.	Looms.	Mills.	Spindles.	Looms.	Mills.	Spindles.	Looms.
Alabama...	16	49,432	863	13	79,234	1,692	29	237,458	4,019
Georgia...	40	198,656	4,493	53	445,454	16,459	68	556,764	13,544
Kentucky...	3	9,622	73	5	42,948	677	8	54,088	748
Maryland...	19	125,706	2,425	25	156,330	2,995	21	176,786	3,520
Mississippi...	49	18,568	644	9	57,004	1,352	10	62,678	1,894
N. Carolina...	49	62,385	1,790	91	337,786	7,254	145	606,627	13,300
S. Carolina...	14	82,334	1,676	34	333,784	8,546	58	626,490	16,394
Tennessee...	16	35,736	818	30	97,524	2,043	27	128,066	2,539
Virginia...	8	44,340	1,322	9	94,294	2,517	13	120,444	3,483
Arkansas...	2	4,015	38	2	77,544	1,726	1	16,640	220
Louisiana...	2	6,096	120	2	66,980	1,726	1	55,132	1,495
Florida...	1	816	1	1	1,400	1	1	1,400	1
Texas...	3	3,648	71	1	1	1	13	77,514	2,365
Total....	161	667,854	14,323	255	1,766,553	39,231	405	2,774,087	62,427

Comparing the census reports of 1880 and 1890 and the reports of the MANUFACTURERS' RECORD for 1894 of the South's cotton-manufacturing industry, we have:

COTTON MANUFACTURING IN THE SOUTH.			
	1880.	1890.	1894.
Capital.....	\$1,976,713	\$61,124,096	\$97,000,000
Number of mills.....	160	254	405
Number of spindles.....	667,854	1,712,930	2,774,087
Looms.....	14,323	39,231	62,427
Value of product.....	\$31,036,712	\$46,971,583	.....

†Estimated on basis of average capital per spindle in 1890.

Making another form of comparison, we have:

Years.	No. of spindles.	No. of looms.	Bales consumed crop year ending August 31.
1860.....	217,291	5,615	10,592
1870.....	416,883	8,203	94,085
1880.....	667,754	14,323	233,886
1890.....	1,712,930	39,231	573,844
1893.....	2,550,000	54,000	743,848
1894.....	2,774,087	62,427	.....

The following list of cotton mills in the Southern States has been compiled from data furnished by the mill owners themselves, and verified by them from printed slips. It may, therefore, be accepted as accurate and authentic. All mills that have long been idle and which are not likely to resume operations have been considered as practically abandoned and have been omitted from the list, so that this directory embraces what may be properly considered as the active mills in the South. Mills that are actually under construction and sufficiently advanced to determine definitely their equipment have been included in the list. In this directory are included mills that spin or weave cotton yarns or fabrics, cotton twine and rope mills and batting factories, which will explain the absence of both spindles and looms in several instances.

The name and location of each mill, with the number of spindles and looms, is given in the following lists, grouped by States. Mills that are under construction are designated thus *, projected mills thus †.

ALABAMA.

Name.	Location.	Spindles.	Looms.
Aniston Mfg. Co.....	Aniston.....	11,168	329
M. M. Smith Co.....	Autaugaville.....	2,200	63
Melbourne Cotton Mill.....	Bear Creek.....	640	.....
Embry, Son & Young.....	Burcham Mills.....	2,500	30
Columbia Cotton Mills.....	Columbia.....	2,500	.....
Tuscaloosa Mfg. Co.....	Cottondale.....	12,000	360
Falls Mfg. Co.....	Darlington.....	1,400	.....
Cherokee Cotton Mills.....	Eufaula.....	16,000	320
Chevala Cotton Mills.....	Eufaula.....	.....	.....
Alabama Cotton Mfg. Co.....	Florence.....	10,000	.....
Cherry Cotton Mills.....	Florence.....	12,000	.....
Dallas Cotton Mfg. Co.....	Huntsville.....	25,000	750
Huntsville Cotton Mill Co.....	Huntsville.....	10,048	.....
West Huntsville Cot. Mill Co.....	Huntsville.....	5,200	.....
Cherokee Mills Co.....	Mobile.....	1,350	.....
Montgomery Cotton Mills.....	Montgomery.....	3,500	.....
Coosa Mfg. Co.....	Piedmont.....	9,256	.....
Prattville Cotton Mills.....	Prattville.....	21,000	240
Coleman Cotton Mills Co.....	Riverside.....	49,000	1,000
Rosedale Mfg. Co.....	Rock Mills.....	5,000	75
Matthews Cotton Mills Co.....	Selma.....	13,500	385
Hurricane Creek Mfg. Co.....	Spring Garden.....	1,000	.....
D. L. & J. A. Lewis.....	Sylamore.....	3,576	.....
Talladega Cotton Factory Co.....	Talladega.....	3,500	.....
Talladega Falls Mfg. Co.....	Talladega.....	30,000	368
Henderson Knitting Mills Co.....	Troy.....	720	.....
Tuscaloosa Cotton Mills.....	Tuscaloosa.....	.....	172
Searcy Rope and Yarn Mill.....	Tuscaloosa.....	3,000	.....
Union Springs Cotton Mills.....	Union Springs.....	4,000	.....
Total, 29 mills.....	.....	237,458	4,019

†Will add 1000 spindles. *Will add 1000 spindles.

ARKANSAS.

Name.	Location.	Spindles.	Looms.
Arkadelphia Cotton Mill.....	Arkadelphia.....	2,400	74
J. A. Hughes.....	Cent Point.....	240	10
Huntington Cotton Mills.....	Little Rock.....	5,000	.....
Little Rock Cotton Mills Co.....	Little Rock.....	3,000	.....
Mammoth Springs Cot. Mills.....	Mammoth Springs.....	3,000	136
Total, 5 mills.....	.....	15,640	220

†Will add 1000 spindles and 20 looms.

FLORIDA.

Name.	Location.	Spindles.	Looms.
Tallahassee Factory.....	Tallahassee.....	1,400	.....
Total, 1 mill.....	.....	1,400	.....

GEORGIA.

Name.	Location.	Spindles.	Looms.
Harmony Mills.....	Alice.....	576	.....
Sumter Cotton Mfg. Co.....	Americus.....	.....	.....
Athens Mfg. Co.....	Athens.....	10,000	350
Princeton Mfg. Co.....	Athens.....	3,850	100
Star Thread Mfg. Co.....	Athens.....	7,500	60
Alpha Mills Co.....	Athens.....	2,600	.....
Thomas Camp et al.....	Atlanta.....	10,000	.....
Atlanta Cotton Mills.....	Atlanta.....	17,672	500
Exposition Cotton Mills.....	Atlanta.....	16,000	480
Fulton Bag and Cotton Mills.....	Atlanta.....	13,248	500
Algernon Mill.....	Augusta.....	4,410	150
Augusta Factory.....	Augusta.....	27,632	807
Dartmouth Spinning Co.....	Augusta.....	8,764	.....
Enterprise Mfg. Co.....	Augusta.....	33,000	904
Globe Cotton Mills.....	Augusta.....	3,500	.....
John P. King Mfg. Co.....	Augusta.....	40,388	1,168
Riverside Mills.....	Augusta.....	.....	.....
The Sibley Mfg. Co.....	Augusta.....	35,136	880
Warwick Cotton Mills.....	Augusta.....	2,500	150
Hutcheson Mfg. Co.....	Banning.....	5,000	.....
Barnesville Mfg. Co.....	Barnesville.....	7,416	.....
Kennon Mfg. Co.....	Brunswick.....	3,000	.....
Cedartown Spinning Co.....	Cedartown.....	3,000	65
Porter Mfg. Co.....	Clarksville.....	3,000	.....
Clegg Mfg. Co.....	Columbus.....	.....	110
Eagle & Phoenix Mfg. Co.....	Columbus.....	46,000	1,500
Muscogee Mfg. Co.....	Columbus.....	12,000	426
Paragon Mfg. Co.....	Columbus.....	.....	195
Swift Mfg. Co.....	Columbus.....	8,750	380
Union Cotton Mills.....	Columbus.....	3,000	.....
Cordele Mfg. Co.....	Cordele.....	3,600	.....
Porterdale Mills.....	Covington.....	5,000	.....
Randolph Mfg. Co.....	Cuthbert.....	3,276	.....
Crown Cotton Mills.....	Dalton.....	5,000	150
Swift Cotton Mills.....	Elberton.....	6,000	125
Forsyth Mfg. Co.....	Forsyth.....	3,000	.....
Griffin Mfg. Co.....	Gainesville.....	2,864	.....
Griffin Mfg. Co.....	Griffin.....	3,800	178
Kincaid Mfg. Co.....	Griffin.....	6,410	200
Harmony Grove Mills.....	Harmony Grove.....	2,500	60
Hartwell Cotton Mills.....	Hartwell.....	2,100	68
High Shoals Mfg. Co.....	High Shoals.....	6,100	81
C. J. Hood, Secretary.....	Hogansville.....	5,000	.....
Bowen, Jewell & Co.....	Jewell's.....	3,336	100
Union Cotton Mills.....	La Fayette.....	3,500	100
La Grange Mills.....	La Grange.....	5,000	75
Osceola Mill.....	Lithonia.....	1,260	6
Bibb Mfg. Co.....	Macon.....	23,000	.....
Manchester Mfg. Co.....	Macon.....	6,000	.....
Newnan Cotton Mill.....	Newnan.....	6,300	.....
Wahoo Mfg. Co.....	Newnan.....	2,600	.....

Oglethorpe Mfg. Co.	Panola	4,000	
Morris Southern C. Y. Mfg. Co.	Panola	5,000	
Houston Factory	Perry	7,800	
Culman Mills	Quitman	1,854	20
Raccoon Mfg. Co.	Raccoon Mills	3,424	104
Elmira Cotton Mill	Reynolds	1,500	40
Phoenix Mfg. Co.	Richmond (P. O.)	5,700	
	Hephzibah		
Rome Cotton Factory	Rome	5,000	
Roswell Mfg. Co.	Roswell	12,000	120
Savannah Cotton Mills	Savannah	10,000	
Shoal Creek Mfg. Co.	Shoal Creek	2,300	
Trion Mfg. Co.	Trion Factory	24,392	694
Troup Factory	Troup Factory	1,600	52
Little River Mills	Waleska	800	
Wayman Factory	Waymanville	3,400	72
Gauley Cotton Mills	West Point	7,300	200
West Point Mfg. Co.	West Point	15,000	
Laurel Cotton Mills	West Point	27,000	700
Georgia Mfg. Co.	White Hall		

Total, 66 mills..... 556,764 12,544
 *Will add 500 spindles. *Will add 1000 spindles. *Will add 4000 spindles. *Will add 5000 spindles and 176 looms.

KENTUCKY.

Name	Location	Spindles	Looms
Argonaut Cotton Mill Co.	Covington	4,000	
Graham Mfg. Co.	Graham	3,000	73
Henderson Cotton Mills	Henderson	26,000	615
Louisville Cotton Batting Mill	Louisville		
Louisville Cotton Mill Co.	Louisville	11,000	
Louisville Girth & Bklt. Mills	Louisville	588	10
Maysville Cotton Mills	Maysville	8,000	
Owensboro Woolen Mills Co.	Owensboro	1,500	50

Total, 8 mills..... 54,088 748

LOUISIANA.

Name	Location	Spindles	Looms
Monroe Cotton Co.	Monroe		
Crecent City Y. & K. Mill	New Orleans	1,248	
Kerr-O'Brien Co.	New Orleans		
Lane Mills	New Orleans	10,884	354
Maginnis Cotton Mills	New Orleans	40,000	1,111
Semmes-Parker Mfg. Co.	New Orleans		
Henrietta Cotton Mills	Washington	3,000	

Total, 6 mills..... 55,132 1,495

MARYLAND.

Name	Location	Spindles	Looms
Alberton Cotton Mills	Alberton	12,000	325
Columbia Mills	Baltimore	2,100	
Elk Mills	Woodstock City	4,000	100
Gray Mfg. Co.	Ellicott City	3,250	104
Thistle Mills Co.	Ilchester	8,000	228
Dumfries Mill	Elkton		84
Franklinville Mills	Franklinville	3,500	40
The Laurel Co.	Laurel	11,000	250
Mt. Vernon Co.	Mt. Vernon	42,720	586
Mt. Washington Mills	Mt. Washington	5,000	126
Oella Mills	Oella	10,000	280
Mt. Vernon Co.	Phenix	6,000	150
Powhatan Mfg. Co.	Powhatan	4,500	121
Savage Factory	Savage	11,000	275
A. D. Irwin & Bro.	Snow Hill		70
Warren Mfg. Co.	Warren	6,000	160
Ashland Mfg. Co.	Wetheredville	3,180	87
Slipper Mill	Woodberry	10,384	181
Druid Mills	Woodberry	13,000	209
Meadow Mill	Woodberry	13,104	
Washington Mill	Woodberry	4,344	128
Woodberry Mills	Woodberry	3,696	74

Total, 22 mills..... 176,786 3,520

*Closed since 1885.

MISSISSIPPI.

Name	Location	Spindles	Looms
Delta Cotton and Woolen Mills	Carrollton	5,000	30
Tombigbee Cotton Mills	Columbus	7,168	330
Haskins Co. (W. J. & J. H.)	Haskins (P. O.)	1,500	50
Hubbard, Leases	Shuqualak		
East Mississippi Cotton Mill	Merida	2,300	31
Natchez Cotton Batting Mill	Natchez		
Natchez Cotton Mills Co.	Natchez	11,872	336
Rosalie Mills Co.	Natchez	7,238	240
Stonewall Mfg. Co.	Stonewall Station	7,216	188
Yocona Mills	Water Valley	5,000	
Mississippi Mills	Wesson	15,184	786

Total, 10 mills..... 62,678 1,894

NORTH CAROLINA.

Name	Location	Spindles	Looms
Asheville Cotton Mills	Asheville	8,448	400
Stonewall Cotton Mill	Belmont	2,300	24
Bessemer City Cotton Co.	Bessemer		
Big Falls Cotton Mill	Big Falls	7,000	
Alamance Factory	Burlington	960	94
Aurora Cotton Mill	Burlington	4,608	250
Carolina Cotton Mills	Burlington	3,900	60
Elmira Cotton Mill	Burlington	3,750	22
Glencoe Cotton Mills	Burlington	3,120	186
Lakeside Cotton Mills	Burlington	3,000	140
E. M. Holt Plaid Mill	Burlington	3,000	140
Windsor Cotton Mill	Burlington	3,000	150
W. M. Odell Mfg. Co.	Brynham	4,400	
New Cotton Mill	Durham	2,000	
Cedar Falls Cotton Mill	Durham	3,036	
Worth Mfg. Co.	Central Falls	2,500	128
Ada Mfg. Co.	Charlotte	8,000	
Atherton Mills	Charlotte	5,000	
Alpha Mills	Charlotte	7,500	
Highland Park Mfg. Co.	Charlotte		760
Charlotte Cotton Mills	Charlotte	9,000	130
Victor Cotton Mills	Charlotte	18,300	100
J. H. Crowley	Charlotte		100
Cherryville Mfg. Co.	Cherryville	6,100	
Patterson Mfg. Co.	China Grove	4,160	130
Cleveland Cotton Mills	Cleveland Mills	7,100	
Enterprise Mfg. Co.	Coleridge	2,000	14
Cannon Mfg. Co.	Concord	9,776	255
Odell Mfg. Co.	Concord	24,000	1,050
Yadkin Falls Mfg. Co.	Concord	5,000	
Cabarrus Cotton Mills	Concord		250
Cumberland Mills	Cumberland	3,200	88
Dallas Cotton Mills	Dallas	2,080	
Linden Mfg. Co.	Davidson	3,500	
Cornelius Cotton Mills	Davidson College	4,900	
Morgan, Cline & Gaffney	Double Shoal	3,000	
Commonwealth Mills	Durham	6,400	
Erwin Cotton Mills Co.	Durham	3,000	
Pearl Cotton Mills	Durham	9,856	160
Durham Cotton Mfg. Co.	E. Durham	12,584	276
Morrison, Gaither & Co.	Eagle Mills	1,000	
Fowler's Net & Twine Fac'y	Elizabeth City	900	1
Elkin Mfg. Co.	Elkin	1,800	
Altamahaw Mills	Elon College	6,496	163
Onahee Cotton Mills	Gastonia	4,400	
Tuscarora Cotton Mills	Engle	1,500	
Bluff Mills	Fayetteville	3,056	62
Fayetteville Cotton Mills	Fayetteville	3,120	
Florence Mills	Forest City	2,100	
Franklinville Mfg. Co.	Franklinville	2,300	40
Randolph Mfg. Co.	Franklinville	1,000	52
Gastonia Cotton Mfg. Co.	Gastonia	12,000	126
Modena Cotton Mills	Gastonia	3,000	112
High Shoals Co.	Gastonia		
*Trenton Cotton Mill	Gastonia	3,000	
*Berry Davidson	Gibsonville	3,000	125
Mincola Mfg. Co.	Gibsonville	1,300	104
L. D. Gulley	Goldsboro	3,400	

Belmont Cotton Mills	Graham	2,592	126
Orlando Cotton Mills	Graham		52
Onida Cotton Mill	Graham	4,424	277
Sidney Cotton Mill	Graham		72
Granite Falls Mfg. Co.	Granite Falls	3,000	
Crown Mills	Greensboro	6,000	
Oak Hill Hosiery Mill	Greensboro	576	
Harden Mfg. Co.	Harden	2,080	
Henrietta Mfg. Co.	Haw River	9,000	434
Thos. W. Holt Mfg. Co.	Henrietta	21,500	616
Empire Plaid Mills	High Point		112
Hope Mills Mfg. Co.	Hope Mills	14,240	400
*Virgin Cotton Mills	Huntersville	2,080	
*Riverside Cotton Factory Co.	Island Ford		
Oakdale Mfg. Co.	Jameson	2,300	
Oneshoro Cotton Mills	Jonesboro		
Mt. Pleasant Cotton Mills	Kimesville	1,872	101
Enterprise Mills	King's Mountain	5,000	
King's Mountain Mfg. Co.	King's Mountain	5,000	40
*Dilling Mfg. Co.	King's Mountain	5,000	
*Philip Baker et al.	King's Mountain		125
Laurel Bluff Cotton Mills	Laurel Hill		300
Ida Yarn Mill	Laurel Hill	3,024	
Springfield Cotton Mill	Laurel Hill	2,176	
Rhmond Cotton Factory	Laurel Hill	2,500	
Leaksville Cotton Mills	Leaksville	4,200	76
Wenonah Cotton Mills	Lexington	3,750	226
Elm Grove Cotton Mills	Lincolnton	3,500	
Laboratory Cotton Mills	Lincolnton	5,800	
Delma Cotton & Wool Mills	Lincolnton	2,900	
O. C. Bynum, Secretary	Lockville		
Spencer Mt. Mills	Lowell	6,000	
McAden Mills	McAdenville	15,000	320
Providence Cotton Mills	Maiden	5,000	
Union Cotton Mill	Maiden	12,240	
Manchester Mills	Manchester	2,000	
Maiden Mill	Maxton	2,800	
Maxton Cotton Mills	Maxton	1,856	
Yadkin Falls Mfg. Co.	Milledgeville	7,500	
Long Island Cotton Mills Co.	Monroe	2,020	
Monroe Plaid Mills	Monroe	960	43
Monroe Cotton Mills	Monroe	8,000	
IS. Settemyer et al.	Mooreboro		
*Mooreville Cotton Mills Co.	Mooreboro		
H. A. Bristol et al.	Morantown	6,000	
Dunavent Cotton Mfg. Co.	Morganton	3,300	
Alpine Cotton & Woolen Mills	Mount Airy	1,500	35
Hamburg Cotton Mills	Mount Airy	1,600	
Laurel Bluff Cotton Mill	Mount Airy	3,122	30
Albion Mfg. Co.	Mount Holly	2,720	
Mount Holly Mills	Mount Holly	2,800	
Nims Mfg. Co.	Mount Holly	2,712	
Tuckasee Mfg. Co.	Mount Holly	7,000	
W. R. Kindley	Mt. Pleasant		
Mountain Island Mills	Mountain Island	6,200	100
Newton Cotton Mills	Newton	5,000	
Carolina Cotton Mills	Newton	3,000	
Willard Mfg. Co.	Orange Factory (P. O. Willard's)	1,650	82
Patterson Cotton & Wm. Mills	Patterson	2,000	50
Pineville Cotton Mills Co.	Pineville	5,000	
Caraleigh Mills Co.	Raleigh	4,600	176
Raleigh Cotton Mills	Raleigh	6,192	
Pilot Cotton Mills	Raleigh	2,500	125
Columbia Mfg. Co.	Ramsey	7,300	207
*Naomi Falls Mfg. Co.	Ramsey	5,000	200
Plaidville Mfg. Co.	Randleman	2,500	191
Powhatan Mfg. Co.	Randleman	1,800	68
Randleman Mfg. Co.	Randleman	5,288	300
Reidsville Cotton Mills	Reidsville	6,104	
Great Fall Mfg. Co.	Rockingham	4,288	134
Ledbetter Mfg. Co.	Rockingham	2,008	
Midway Mills	Rockingham	2,000	
Fee Dee Mfg. Co.	Rockingham	5,072	250
Roberts Mfg. Co.	Rockingham	5,000	
Rocky Mount Mills	Rocky Mount	25,000	
Arista Mills	Salem	5,184	180
Vance Cotton Mills	Salisbury	10,000	
Salisbury Cotton Mills	Salisbury	11,000	400
Saxapahaw Cotton Mills	Saxapahaw (P. O.)	5,000	
Belmont Cotton Mills	Shelby	4,500	
Laura Glenn Mills	Shelby	4,400	
Staley Cotton Mill Co.	Staley	1,000	
Stanley Creek Cotton Mills Co.	Stanley Creek	2,080	
*Statesville Cotton Mill Co.	Statesville	5,000	75
Swepton Mills	Sweptonville	3,120	150
Tarboro Cotton Factory	Tarboro	8,000	
Taylorville Cotton Mill	Taylorville	726	24
Turnersburg Cotton Mill	Turnersburg	1,200	
Wadesboro Cotton Mills Co.	Wadesboro	4,032	
Wilmington Cotton Mills	Wilmington	7,000	226
Wilson Cotton Mills	Wilson	7,150	
Worth Mfg. Co.	Worthville	11,215	310

Total, 151 mills..... 660,627 13,306
 *Will add 150 spindles. *To double capacity. *Will add 2000 spindles.

SOUTH CAROLINA.

Name	Location	Spindles	Looms
*Dunkirk Cotton Mfg. Co.	Aiken	10,000	
Anderson Cotton Mills	Anderson	15,000	594
Cedar Hill Cotton Mills	Arlington	1,500	36
Pendleton Factory	Auten	2,388	
Bamberg Cotton Mills	Bamberg	6,720	72
Batesburg Cotton Mill Co.	Batesburg		
Batesville Mill	Batesville	2,500	
*Aiken Mfg. Co.	Blackburg	15,000	100
Camden Cotton Mills	Camden	12,960	350
Charleston Cotton Mills	Charleston	25,000	720
Catawba Mills Co.	Chester	11,000	
Chester Mfg. Co.	Chester		401
Clifton Mfg. Co.	Clifton	50,848	1,652
Clover Cotton Mfg. Co.	Columbia	6,000	
*Capital Mills Co.	Columbia	30,000	
Miller B-tting Mfg. Co.	Columbia		
Cowpens Mfg. Co.	Cowpens	7,072	
Darlington Mfg. Co.	Darlington	11,040	320
*C. Ehrhardt & Sons	Ehrhardt		
Enoree Mfg. Co.	Enoree	30,720	820
Fairmont Yarn Mfg.	Fairmont	4,000	
Fingerville Mfg. Co.	Fingerville	2,560	
Fork Shoals Mfg. Co.	Fork Shoals	2,490	
Fort Mill Mfg. Co.	Fort Mill		400
*Mill fort Mill Co.	Fort Mill	5,200	200
*Gaffney Mfg. Co.	Gaffney	10,000	300
Glendale Mills	Glendale	10,096	510
Graniteville Mfg. Co.	Graniteville	33,216	959
Campana Cotton Mills	Greenville	11,000	
Huguenot Mills	Greenville	2,620	212
Laureau Mfg. Co.	Greenville	3,300	
Greenwood Cotton Mill	Greenwood	5,000	168
*Hampton Cotton Mills	Hampton		
Red Bank Mills	Irene	2,864	208
*Johnston City Cotton Mills	Johnston		
*Langley Mfg. Co.	Langley	25,000	850
*C. C. Fotherstone, Secretary	Laurens	5,000	
Lexington Mfg. Co.	Lexington	3,000	100
*Lockhart Shoals Mfg. Co.	Lockhart Shoals (P. O. at Union)	20,000	
F. H. Cash	Martinsville	1,500	
McCall Mfg. Co.	McColl	5,000	
Newberry Cotton Mill	Newberry	10,880	370
Courtenay Mfg. Co.	Newry		
Orange Mill	Orangeburg	5,000	
*Pacolet Mfg. Co.	Pacolet	26,700	1,024
*Pacolet Mfg. Co.	Pacolet	26,224	840
Pelzer Mfg. Co.	Pelzer	52,000	1,550
Piedmont Mills	Piedmont	46,860	1,300
Pelham Mills	Pelham	8,000	
Reedy River Mill	Reedy River Factory	5,500	156

Cedar Shoals Mfg. Co.	Richburg	1,420	
Fishing Creek Mfg. Co.	Richburg	6,000	
Globe Cotton Mills	Rock Hill	8,000	
Rock Hill Cotton Factory Co.	Rock Hill	5,000	100
Standard Cotton Mills	Rock Hill		570
Beaumont Mfg. Co.	Spartanburg	3,100	
Spartan Mill	Spartanburg	32,160	1,100
Sumter Cotton Mills	Sumter	3,000	
*Tuscanan Mills Co.	Wellford	15,000	
*Union Cotton Mill	Union		
Whitney Mfg. Co.	Whitney	10,000	310

Total, 58 mills..... 626,490 16,594
 *Will add 100 looms. *Will add 2500 spindles and 100 looms.
 *Will add 200 spindles and 216 looms.

TENNESSEE.

Name.	Location.	Spindles.	Looms.
North Athens Cotton Mill.....	Athens	5,000 .....	.....
Bristol Cotton Mill.....	Bristol	2,936	18
Chattanooga Cotton Factory.....	Chattanooga.....	1,000 .....	.....
Columbia Cotton Mill Co.....	Columbia	5,000	18
Fall Mills Mfg. Co.....	Fall Mills	1,068	9
Spring Creek Mills.....	Henry.....	576 .....	.....
Jonesboro Cotton Mills.....	Jonesboro.....	4,300 .....	.....
Brookside Mills.....	Knoxville.....	5,000	576
Crownson Mills.....	Lawrenceburg.....	576 .....	.....
W. N. Austin & Co.....	Lawrenceburg.....	1,500	76
McMinnville Co.....	McMinnville.....	2,700	64
Bluff City Cotton Mills.....	Memphis	14,822	144
Highland Mfg. Co.....	Memphis.....	.....	.....
Eureka Mills.....	Mortimer (P. O. Telles junct'n).....	1,664 .....	.....
Mt. Verd Mills Co.....	Mt. Verd.....	2,000 .....	.....
Nashville Cotton Mills.....	Nashville.....	18,000	500
Tennessee Mfg. Co.....	Nashville.....	33,000	1,318
Warren Mill.....	Oregon.....	1,440	76
Thackasaw Mills.....	Paris.....	1,136 .....	.....
Peachers Mills Co.....	Peachers Mills.....	.....	.....
Pinewood Cotton Mills.....	Pinewood.....	2,576 .....	.....
Rockford Cotton Mills Co.....	Rockford.....	6,148 .....	.....
Great Falls Cotton Mills Co.....	Rock Isld Depot (P. O. Falls City).....	5,000	136
Sylvan Mills.....	Shelbyville.....	3,720	104
Laurel Hill Mfg. Co.....	Sumatmore.....	4,050 .....	.....
Trenton Cotton Mills.....	Trenton.....	3,500	60
Vale Mills.....	Vale Mills.....	1,500 .....	.....

WANTS PROTECTION.

President Hickman Strongly Opposed to Free Trade.

AUGUSTA, GA., February 8.

Editor Manufacturers' Record:

I am now receiving fifty new looms for the Graniteville Mill, and it is my intention to purchase \$40,000 worth of machinery during this year. I shall, however, make no orders until the tariff question is settled. I am sorry that I cannot agree with my democratic friends on this great and vital question, the tariff, as the bill has passed the House, especially with the income-tax rider. My hope is that the Senate will at least throw the rider. I believe in a tariff for revenue and incidental protection.

I would like to say more on this subject, but you do not desire political matters discussed in your valuable paper, and yet this has much to do with the great manufacturing interest of this great country.

I have so often expressed my views on the subject of manufacturing cotton in the South, and so much has been written by others, that I fear the subject will become stale.

I believe that it has been clearly demonstrated that the East cannot compete with the South in manufacturing the heavy fabrics. As to the finer goods, it is only a question of time.

The fight between New England and the South is the same that was, and is now, between Old England and New England. New England first stopped the importation of the heavy fabrics, bleached goods, print cloths and prints next, and so on. Now, as you know, they are making great varieties of beautiful goods which Old England cannot ship to this country. Here let me say by way of parenthesis that this wonderful development of manufacturing in this country was because of protection against cheap labor. Had it not been for protection we would have but few cotton mills or iron foundries or machine shops in this country.

In the near future the South will manufacture print cloths, prints and bleached goods and other finer fabrics, and as time rolls on we will make many styles of fine goods now made in New England, and New England will fall back on many styles now being imported—all this will happen in due time. So, with intelligent legislation, we will all have enough to do.

The South has the advantage in climate, water-power and coal. So, with the cotton at our doors, if we cannot manufacture goods cheaper than our New England friends, it will be for the want of intelligence, industry and economy. We have now the best labor on earth for the goods we are making, and as the machinery comes to us to make finer goods the labor will come also in great abundance, for we will pay as good wages for skilled labor as New England, and as they can live much cheaper in the South on account of the climate and other reasons, they will surely come, and that as soon as wanted.

As to disposing of our products, our facilities are now about as good as New England's, and we have prospects of great improvements. As to shipments to China and Africa the South is doing fairly well. I have not been without orders to China, Africa and South America in several years. The great drawback to sales for China is the low price of silver; you know what this means; no use to discuss it. We labor under other difficulties. We want steamship lines to South America. Our goods should be covered by the flag of our country, and, if need be, our government should help its manufacturers as England, France, Germany and Austria helped theirs. Any help in that direction will help the poorest laborer in the country. No space to discuss this proposition, but it is true all the same and can be proven beyond the shadow of a doubt.

If we are to become a great manufacturing country we must be protected by our government to the extent of outside cheap labor at least. Our free-trade friends, if they could have their way, would bankrupt this country inside of five years.

H. H. HICKMAN.

WANTS FREE TRADE.

A Leading Georgia Cotton Manufacturer Opposed to Protection.

Editor Manufacturers' Record:

In compliance with your request for a detailed statement of my views on the tariff, I submit the following for your consideration:

While at Charlotte, N. C., Mr. D. A. Tompkins asked me if I wished to see a factory that needed no protection. I told him I would be glad to see it. We took his carriage, and in fifteen minutes I was standing in as complete a yarn mill as can be built at the present time. It runs 5000 spindles, and runs seventy-two hours per week on No. 40 yarn.

So far as the mill and help are concerned, they are able to strip their breasts bare and invite the world to come and buy.

I could see but one drawback, and that was in the cost of the mill. This mill cost \$105,000, and could have been put there, if the world's markets had been open to them, for \$50,000.

Give the South the world's markets for her purchases, and she is willing to depend on the world's markets for her sales. Why not? Are not all those who labor in our fields dependent on the world's markets, while they are burdened with heavy taxes on their purchasing markets? Would not the labor of those fields rather compete with the labor of England than that of Egypt and India, which is now the case? Can any sane mind say that they would not rather work under a shelter and compete with those working under shelters the world over, than work unprotected under our sun against those who work unprotected from the sun the world over?

In regard to the price of our yarns compared with foreign yarns, I have only to say that while sitting in Taylor & Longstreet's office in Philadelphia last summer I heard a long tirade against Southern democrats for interfering with the tariff. The speaker was a German manufacturer living in Philadelphia. He was just from Germany. After he had found a place to halt, and silence was in order, I asked him what difference was there in prices of yarns in Philadelphia and Germany. He frankly said, "little, if any," and reiterated that he did not think there was any. Now, if that be true, why should he want 100 per cent. on hosiery? If tariffs kept goods out of the country, how is it that under the highest tariff ever enjoyed by this country our imports should be larger, as they were during the winter and spring of 1892-93, than ever before, and the summer find us with a debt of \$50,000,000, as was the case last summer?

Tariffs act on nations very much as whiskey on individuals. I was once prizing a rock out of a hole, and had several men with bars for levers, but was unable to raise the rock. A countryman coming along, driving a yoke of oxen, being just from town and unduly stimulated, inquired what we intended doing. I replied that we wanted to get that rock out. He said, "lay down your bars," and began to strip himself of coat and vest; then getting his shoulder to the rock, his efforts brought a grunt, but nothing more. Now, how much akin is this to the tariff's effect on men? You can't talk to a workman after he has been well protected but he thinks himself in mind and matter far superior to the workmen of all the world. He calls for Billy Patterson, joins the Knights, and is well content to work half his time.

Let me give a conversation which passed

between myself and a shoemaker as I journeyed from Philadelphia to Atlantic City. He was English by birth, and intelligent. I asked what he could earn a week, and he replied about \$30.00. I said, "you should be rich." "Yes," he replied, "if I could get steady work I could lay up money, but I can't get work half my time. When a dealer advertises for workmen we all pitch in, work day and night, and soon we are informed they have shoes enough to last months."

On my return I sat by a man who claimed to be a rock-cutter. I inquired his wages. He replied, "\$4.00 per day." I said, "you should save money enough and to spare." He replied that he could if he could get work half his time. He said that they would now and again strike a job that would last months; then they would be idle until all they had made was wasted; then winter was always slack. This occurred before the "McKinley tariff" went into effect. It was this lack of work which brought forth the McKinley tariff in order to stop importations, that our skilled workmen might have more steady employment.

Last winter we took the first spree under the McKinley tariff; this winter we are on the stool of repentance. If the republicans were in power we would certainly call on them for another rail to be put across the gap.

Last winter all exports were being held so high at home that they could find no purchasers abroad. Our wheat, pork and cotton found little sale except in home markets. We were like that man who attempted to lift the rock out of the hole—we felt able to buy all others had to sell and keep all we had on hand. This experiment found us last spring with \$50,000,000 of indebtedness, which could only be paid in gold. This winter shows a different experience. We are sending abroad 750,000 bales more of cotton than last year up to this time, and taking for ourselves 170,000 bales less. This kind of living is the true motive power which will cause the return of prosperity and true thrift—sell more than we buy.

I cannot say that the Athens Manufacturing Co. has shipped any goods out of the country. When I said "we," I meant the Southern manufacturers. The sheeting and shirting manufacturers have for a number of years given largely of their output to the export trade, and the Cone Importing & Exporting Co., of New York, which controls the product of forty-five Southern plaid mills, assured me last summer that it was making regular shipments to Brazil, and had sent a man there to take charge of its business.

In regard to our yarn mills getting nearer to the consumer by knitting and weaving their yarns, I can only say that all mills in the South knitting and weaving their own product have been kept steadily employed, with fair and reasonable profits. The expense of commissions and freight and discounts, which amounts to over 10 per cent. upon the full value of the yarns before they get into the hands of the weaver in Philadelphia, is more waste than can be submitted to under a free-trade system. The world has a closer way of doing business, and if we continue as we are and expect to meet the world, we shall fail in our efforts. We must bring the looms to the spindles, or the spindles must go to the looms. The American machine has a front and back action; when one wants his money from a savings bank, all want it; when one goes back with his money, all go; when one holds cotton, all hold; when one lets go, all let loose. What plainer evidence have we than last winter's experience? Last winter all of the South, and many North, were holding cotton; now no man wants cotton. Last winter every day found orders pressing into our office for goods, and we running day and night; this winter we are seeking buyers. Importers bringing un-

precedented amounts of goods to our markets from all parts of the world; this year the month of January showing \$30,000,000 less imports than in January a year ago. Does this not illustrate the shoemaker's experience—working day and night at high prices, only to lie idle half our time? The New York banks in August were all suspended—it was as if New York had no banks; today New York is loaded down with banks, and should this state of things exist for five years half of these banks would go out of business. This is no new development. It was the history of England from 1800 to 1830. It has been the history of this country from 1865 to 1894.

Now, as to the uses we shall have for our spindles after our ports are opened.

Are not all the spindles of the outside world busy for their customers, and their goods consumed as fast as produced? Now, if that be true, will they attempt to run day and night without sleep or rest in order that they may supply our market as well as the one they already have in hand? If they cannot or will not do this, then I feel sure that we shall have quite as much to do in the future as we have had to do in the past. Goods will be cheapened, and they ought to be cheapened, because the labor employed in protected business is so much better paid than in unprotected business that it causes labor to press into protected work from at home and abroad, that our limited field for the goods manufactured will only furnish the number employed a little over half their time, which is detrimental to the worker as well as a loss to the State at large. But yet this loss of time can only equalize the labor, which must always balance itself between the consumer and the producer. No man can keep another man employed in his own use and give him \$1.00 per day while he himself receives but fifty cents. If he employs him he can only employ him half his time, and that is the great trouble of this country—the consumers do not make money enough to keep the producers of protected goods fully employed. The great mass of agricultural labor of the South does not average over thirty-three and one-third cents per day, and they must be quite limited in their purchasing power if they have to pay fine shoemakers \$30.00 a week or rock-cutters \$4.00 a day.

Show me a man who would change the constitution of this country and allow each State to frame its own tariff against every other State; and yet these are great nations of people, occupying a continent reaching from ocean to ocean, with 70,000,000 of people and every degree of climate known to the civilized world. Will any man say to lock Florida's oranges out of New York would be a blessing to New York? or Maine's ice from Savannah a blessing to Savannah? the grain fields of the West from the cotton fields of the South? and then develop the most life from the earth, air and sun that human skill and power can devise? If so we can no longer say, "the earth is the Lord's, and the fullness thereof, and we are His children. Amen."

R. L. BLOOMFIELD.

Athens, Ga.

The Needs of Southern Cotton Manufacturers.

MEMPHIS, TENN., February 9.

Editor Manufacturers' Record:

The question asked as to the South's advantages for fine goods and the outlook for foreign trade could be treated upon separately and at length, and much has already been written covering these questions, and there is very little room for further treatment of them that will add much to the prevalent information.

That the South is surely working out a great future in the manufacture of cotton goods will not be denied by those who have been conversant with its history for the past twenty years. Taking its status in 1874

and comparing with 1894, the great change as to spindles employed and character of goods made is marvelous. The writer has been closely identified with this industry in the South covering this period, and has the satisfaction of having been identified in its progress from the coarser to finer yarns and fabrics. The leading question of what may be known as finer goods at the present time as compared in the past twenty-five years may be well taken in consideration. The South started in this line of manufacture on a class of goods known as osnaburgs, a fabric weighing eight ounces per yard, made from yarns counting six hanks per pound and goods 32x32, or sixty-four threads per square inch. Its next step was to a fabric weighing six ounces per yard, made from yarns counting thirteen hanks per pound, 48x48, counting ninety-six threads per square inch. The succeeding step was sheetings weighing four ounces per square yard, made from yarns counting twenty-four hanks per pound, 60x60, or 120 threads per square inch. And if we go back to New England thirty years ago this latter fabric was then considered in the category of fine fabrics. But we find New England has advanced from this point to a much finer fabric, and is making sheetings from yarns counting 150 hanks per pound to 300 to 400 threads per square inch. As the South has progressed from osnaburgs to four-yard sheeting, our Eastern manufacturers have progressed more rapidly to much finer fabrics and diversified their products to a great variety of fabrics calling for very fine-spun numbers. In the line of yarns the South has entered the field up to 40s, and the writer was probably the first in this field in the South and shipped the first consignment of 40s two-ply wet-twisted yarns made south of the Ohio river. The fact is demonstrated that the mere matter of carding and spinning up to forty yarns is possible and practicable in the South, machinery and equipment always considered in the schedule to make these numbers. The conversion of these yarns into a fabric is purely mechanical, and no one can dispute its accomplishment. Granting this much, it leads up to the question of manufacturing a class of goods entirely, so far as I am informed, ignored or not attempted yet by Southern manufacturers. Such an attempt should only be made from new mills organized with this in view. I refer to a class of goods known as bleached sheetings, such as "Fruit of the Loom," "Wamsuta," "New York Mills" and others of like design and class, made from yarns averaging thirty-six to forty hanks per pound and counting 176 threads to the square inch.

The question may be naturally asked why we do not attempt this line of goods, and in this class of fabric may also be included print cloths twenty-eight inches wide, 64x64, 128 threads per square inch, with an average of twenty-eight hanks per pound. To make these lines of fabric and ship them East to be bleached, printed and finished is just where the advantage to the South disappears. As an example I will illustrate. It now costs the New England manufacturer \$3.00 per bale of cotton of 500 pounds weight to move it from, say, Memphis to his mills. Assuming the same character of goods be made here, and that 500 pounds of invoice cotton will make 450 pounds of sheeting, the freight to bleacheries East would cost an average of seventy cents per hundred pounds, or would represent \$3.15 per bale of cotton. The apparent advantage of \$3.00 per bale is thus lost, with a difference of fifteen cents per bale in favor of the Fall River or Lowell manufacturers. Assuming that both fabrics arrive at bleachery or print works on a level of cost, and from that point to the selling agents of Boston, New York, Philadelphia and Baltimore, we find, then, that the merits of the goods will sell

them to equal advantage, the preponderance of favor being always to the advantage of well-known brands. It may be truthfully said the advantages to the Southern mills have not been wholly enumerated. This is true in the matter of motive power (steam), hours of labor, etc., but it is, of course, understood the question of cheap labor is not as to individual compensation, but as to cost per pound produced by labor. The Eastern mills pay relatively higher for individual labor, while on the class of goods here discussed their productive labor would no doubt be lower than could be produced by us for some years to come. Hence, my conclusion is the decided advantage would be in favor of Eastern mills so long as Southern manufacturers shipped goods East for printing, bleaching, etc. And to obtain such advantage in this line of manufacture as by our geographical situation we would be entitled to, the first necessity would be the establishment of bleachery and print works at some point of distribution to the large commercial centres of the West, commencing at Cincinnati. Such location should be accessible by low freights to mills of the South. With such an enterprise started with the understanding that it will purchase products of Southern mills at the same prices that the products of Eastern mills can be purchased for, it would induce present and future contemplated establishments for the manufacture of these lines of fabrics. The millions of inhabitants of the Mississippi and Ohio valleys could be counted on as customers, with Cincinnati, Chicago and St. Louis the distributing points. It would seem that if this line of manufacture is not attempted in the next four or five years, the Southern cotton manufacturers are not alive to their natural advantage.

As to the question of labor, it has always kept in progress with the changes from coarser to finer fabrics as attempted by Southern manufacturers, and will progress just as fast as the Southern manufacturers will allow it to do. If the South shall continue to make only one or two classes of goods, a foreign market must come, for competition now is so close among Southern mills that there is little room for more mills on the same line of goods. My motto is to compete with Eastern mills for the home consumption, taking the weapons that lay at our feet to accomplish it, and let our Eastern brothers solve the export business. They have got more capital than we have to accomplish it, and when they do solve it profitably to themselves, why, like good children, we will profit by their example.

F. P. TOOF.

A Suggestion to Cotton-Mill People.

There is probably no industry in the world which requires closer attention in every department than cotton manufacturing. The mill that trusts to old machinery in competition with mills equipped with all modern improvements will inevitably have to give up. Within the last few years the progress made in textile machinery has been marvelous, and many mills have found it profitable to throw out machinery which only a few years ago was considered up to date, in order to put in the latest equipment. Because the South has great natural advantages is no reason why it should attempt to use old or second-hand machinery. The MANUFACTURERS' RECORD publishes today the advertisements of many of the leading textile machinery people in the country. It commends them to the attention of its Southern readers. They are concerns that have paid special attention to Southern mills. Every man who contemplates building a new mill and every company that wants new equipment of any kind, or any one that has antiquated machinery, would find it profitable to get into communication with the textile advertisers in this issue of the MANUFACTURERS' RECORD. From them can be learned many facts regarding the latest improvements and the best methods of equipping mills. The mills that may not be making much money can probably be made profitable by discarding some of their old machinery and putting in a full supply of the latest and best. Read the advertisements in this issue of the MANUFACTURERS' RECORD as carefully as you read everything else, and when you have examined them all, if you do not contemplate buying any machinery at present, put aside this issue for future use.

THE VIEWS OF EXPERTS.

Extracts from Letters of Cotton Manufacturers of the South to the Manufacturers' Record.

Maxton Cotton Mills, Maxton, N. C.: The outlook for the manufacture of fine goods in the South has been very good, but under the proposed Wilson tariff bill it will be anything else but encouraging. Competition will be strongest on the finer goods.

Savannah Cotton Mills, Savannah, Ga.: We think fine goods can be made in the South to much better advantage than any other section of the country, particularly on the Atlantic coast. The humid climate is very favorable for fine yarns and labor is cheap and efficient.

Piedmont Manufacturing Co., Piedmont: I think goods up to six yards to the pound can be made in the South to better advantage than North. We sell a good many goods to China and South America.

A Georgia company writes: We believe cotton can be manufactured in the South as cheaply as in any part of the country. Labor is reliable and the cost of living is less than North. We have cotton at first cost; we have a good healthy country and good water-power. We believe the South will develop largely in the manufacture of fine cottons in the next twenty-five years, while Georgia, I regret to say, is falling behind in cotton and woolen mills, owing to hostile legislation in hours of labor and taxes, besides other hostile acts. She has made very little improvement in the past six years.

Cedartown Spinning Co., Cedartown, Ga.: Have been in the South for twelve years; have spun from No. 6 to No. 40. Find no fault with climate, and think help can be educated in short time to card, spin and weave fine counts; also think all advantages are in favor of the South. In fact, think the Southern mills have the advantage of at least 10 per cent. over the mills of the Middle and Eastern States, referring to some of the mills that have made and declared dividends from 20 to 40 per cent. in the last two years. In the near future may give you some facts.

Mammoth Spring Cotton Mills, Mammoth Spring, Ark.: We think that the South can successfully compete with the East on the finer classes of cotton goods whenever they equip their mills thoroughly for this class of work. Our labor is becoming more skilled every year.

Enterprise Knitting Mills, Enterprise, Miss.: I think we have the decided advantage of the Northern and Western factory, the saving of freights and labor being cheaper, the climate being better adapted.

Enterprise Manufacturing Co., Coleridge, N. C.: We believe the South is adapted to the manufacture of as fine goods as any other portion of the United States, with the choice of raw material at the door, labor abundant and very efficient with short experience, water-power abundant in most sections.

Elkin Manufacturing Co., Elkin, N. C.: We think the South is forging ahead in the matter of making finer goods more rapidly than formerly. Much finer yarns are spun in this State than just a few years ago. There is no trouble in getting help for any kind of work that has been undertaken.

Cherryville Manufacturing Co., Cherryville, N. C.: We think the South will gradually get on to finer goods as we become more expert in manufacturing. We think the outlook for trade at present very gloomy, and it depends altogether on the action of Congress as to prospects in the future. We don't need the "Wilson industry killer."

Naomi Falls Manufacturing Co., Randleman, N. C.: The South is fast seeing the importance of making finer goods, and as an evidence of that fact the new mills being

built are built with that idea in view. This section has the climate, labor and cotton, and is surely destined to be the cotton-manufacturing centre of the United States. We refer especially to North and South Carolina, and we intend this for fine as well as coarse goods. We are not shipping to foreign markets, but in our opinion this subject needs the closest attention of Southern manufacturers. It will help on to the final success which we feel is bound to come.

Cleveland Cotton Mills, Cleveland Mills: Our help is all native help, and we had an intelligent Connecticut man running our mill, who said that ours was as easily trained, capable and reliable as any he had ever seen, and he had run some of the New England mills. We believe our help as good and reliable and easily trained as any help in America.

Randolph Manufacturing Co., Cuthbert, Ga.: Manufacturers are turning attention to finer goods; would be more profitable than the heavy goods. One great drawback on the Southern factories is the way their goods are handled, mainly by commission houses—heavy commission and high discount—all against the yarn mills of the South. The mills making yarn should ship direct to Northern mills. The broker should not be allowed the commission and discount. This could be saved, and the business could be done direct and be more satisfactory and profitable. This mill has not shipped to foreign countries. Never having engaged in foreign trade, my speculations on that would be comparatively worthless. The manufacturers need more money and less legislation. If the country could be delivered from agitation and have something settled it would be much better. Confidence must have a stable basis. Without it there is too much friction to do business with satisfaction or pleasure.

Yadkin Falls Manufacturing Co., Milledgeville, N. C.: The manufacturers will be obliged to move South, and they should be organized and have traveling men on salaries to sell their goods. The only hope for us is to make more goods and less waste. Push everything for what there is in it. Take new short cuts and every advantage.

Leak, Wall & McRae, Rockingham, N. C.: We think the South should go into the manufacturing of fine goods. There is no reason why we cannot successfully compete with any other section, for we have cheap and good labor, and cotton at our doors.

W. J. Hubbard, Shuqualak, Miss.: Situated in east Mississippi among the cotton fields, and having followed the spinning of cotton in numbers from six to twelve for the past twenty years, I hope to be allowed to say something of my own experience in the business, and if it is of any benefit to others I shall feel that I have done only my duty to my country. My own experience has been with a small mill of 1500 spindles and forty plain looms. I have had to teach myself and all my operatives, taking them from the surrounding neighborhood green and putting them into the mill, and I have always found plenty of intelligent, virtuous and respectable poor white people who are contented to work in the mill, and they generally remain contented and are not disposed to move from one mill to another, as is the case in large manufacturing settlements. I have families now with me who have grown up from childhood in our employment, and our newest or greenest help has been with us six years, and from this time to twenty years. We rarely have any artificial heat in the mill, two heating stoves being sufficient except a very few extreme cold days in January. I am of the opinion that Southern mills will gradually grow into the manufacture of finer goods when the time comes that it is not so profitable to spin and weave the heavier goods. They are doing it, and can as well when the neces-

city arises spin fine yarns as the coarser numbers. There is no difficulty now to buy any grade or class of cotton needed at one to one and one-quarter cents less than New England has to pay.

Pee Dee Manufacturing Co., Rockingham, N. C.: It is our opinion that as fine yarns and goods can be made in the South as any part of the United States. No. 40 is already being made, No. 100 will be made in the gulf sections after having passed through the necessary experience with lower numbers. We are not exporting. Those that are doing it at the expense of capital and labor so employed. How can we compete with our European competitors when they build their mills for one-half of what ours cost us? Please remember that the difference between the cost of raw materials and net receipts for the finished product is all there is to divide between capital and labor. A mill in this country costing \$200,000 can be built in England, for instance, for \$100,000. A 10 per cent. dividend for our capitalist calls for \$20,000, for the English capitalist only \$10,000, giving the latter that much the advantage over us, saying nothing of the fact that these surplus earnings will go much further for repairs, new additions or any other expenses. Why expect the cotton manufacturers to compete with foreigners in a foreign market and carry the burden of double capitalization arising from a protection accorded to industries engaged in the manufacture of articles embraced in the cotton-mill plant? It would seem to us right and just that every industry should be on an equal footing—each pay its own taxes and enjoy the just rewards of its venture and labor. One thing is certain, namely, that whenever the supply of an article exceeds the home demand for it business methods would require that we either export the surplus or restrict the production. To do the former would require that no more capital be engaged for a given output than is invested by our foreign rival, in order that we may obtain like profits on the investment. To do the latter, restrict production, would be a complete surrender, throwing up the sponge to our foreign competitors. It would be undemocratic, un-Americanlike, and something which we believe will never be done by genuine Anglo-Saxon Americans.

Joseph G. Thorpe, Greens, S. C.: I made fine yarns on English mules, No. 36 yarn, in 1867 at Graniteville, S. C., when I had general management of all the carding and spinning for the Graniteville Manufacturing Co., for nearly twenty years, and they can make fine goods now, if they want to do so, cheaper than they can make them at the North. The Graniteville Manufacturing Co. has always been successful. My home is there, having lived there forty years, but leased this mill at present. I am not shipping any goods to foreign countries, and the only thing we want is a high protective tariff.

Tuckasee Manufacturing Co., Mount Holly, N. C.: It is becoming more apparent every day that fine gingham and yarns can be manufactured more cheaply in the South than North, and labor is more reliable, though not quite so intelligent as out, perhaps, and while the business is very much depressed at present, the majority of the mills are in good shape financially, and, with some alterations and additions suggested by the hard times, will be put upon satisfactory dividend-paying basis.

Rock Hill Cotton Factory Co., Rock Hill, S. C.: We consider the Southern country the natural home of cotton manufacturing, and that it is simply a question of a few years when both fine and coarse goods will all be made more cheaply here. The mills are fast "coming to the cotton."

A South Carolina company: The tendency in the South is toward making the finer goods. The South has great advantage in being near the cotton fields, with

abundance of cheap labor and material, besides being less disturbed by labor unions and strikes, and the severe winter seasons of the North. There is an immense field open for cheap labor when they decide to use the negro labor, which will come eventually.

Manchester Cotton Mills, Dallas, Texas: We think the South is the coming manufacturing centre of cotton goods of the world, as our climate is better adapted to manufacture and labor than any place we know.

Maginnis Cotton Mills, New Orleans, La.: The business on brown cotton sheetings, shirtings and drillings, etc., has been unusually dull for some months past; prices now prevailing on heavy as well as light goods are unprecedentedly low; in fact, decidedly lower than any previous prices we have made during the past twelve years. The raw material has not been proportionately reduced in value. We find coarse-yarn goods have been less salable during the past six months than any previous seasons, the trade on which has been curtailed on account of stringent times and desire on the part of merchants to carry light stock. There is some disposition on the part of the trade in this vicinity for lighter weight goods. The disposition towards light weights on Eastern and Western markets is increasing from year to year. The wages paid in our mill are rather higher than at most other points. We have made no reduction on our labor. Our building was originally constructed to contain one-third more machinery than we have in it at present. We have materially increased our machinery by the purchase of fifty-one looms, and have speeded all of our looms for the purpose of increasing our weaving capacity. We have also bought five of Howard & Bullough revolving flat-top cards, besides other machinery of minor importance. We expect to further increase our plant during this year.

A Nashville (Tenn.) company: We have no new suggestion to make as to the advantage the Southern spinner has over the Eastern spinner. The best argument we can use is that in the past twelve months the Southern mills have been able to run, and, we think, not at a loss. Still a great many Eastern mills have been forced to shut down partly, if not wholly. We make no attempt to place the goods manufactured by this company in foreign markets, having been able heretofore to place all of the goods manufactured in our own market.

Whitney Manufacturing Co., Whitney, S. C.: We think the manufacture of fine goods is on the increase in the South. Labor is satisfactory. It is no longer a question, but a conceded fact, that cotton goods can be made cheaper in the South than in New England.

Fairmont Yarn Mills, Fairmont, S. C.: No reason why finer grades of yarns and goods could not be successfully manufactured in the South. Mills properly equipped can do as good work South as anywhere, especially if we would get a few operators skilled in finer work.

Raleigh Cotton Mills, Raleigh, N. C.: No better place for the manufacture of fine goods than the South. We have the best class of help in the world, and have just booked a large order for yarns at half a cent over prices of Northern spinners.

Cherry Cotton Mills, Florence, Ala.: We cannot see why cotton manufacturing in the South should not develop to compete with any country. Our climate is all that could be desired. Operatives can be brought from any place on the globe, however skilled they may be, and they can live cheaper, work more and cheaper; then why should we not make any goods to be made of cotton, however fine? We think the introduction of suitable machinery and operatives capable of running it is all that

is needed to make goods for foreign trade that would compete with goods from any place in the world, and that it is only a question of time when the South will lead the world in manufacturing cotton.

Modena Cotton Mills, Gastonia, N. C.: All the new mills going up in the South, so far as I can learn, are buying machinery suitable for making fine yarns, 30s to 60s, and fine sheeting, seventy and eighty picks, four to five yards to the pound. No new mill can afford to make coarse goods now. Many of our mills are shipping abroad, and my opinion is that in a few years a large part of our product will be thus disposed of.

Standard Cotton Mills, Rock Hill, S. C.: The South can make now fine colored goods, tickings, print cloths, etc., and many mills have been built, and are now building, to make fine goods. The Eastern mills will not be able to compete in this class of goods in the next five years.

Luna Cotton Mills, Fork Mill, S. C.: In this particular section we do not think that at present it is practicable to try fine goods, more especially on account of short-staple cotton and inexperienced help, but time will overcome the latter. Down with the Wilson bill. We want protection.

J. M. Odell Manufacturing Co., Bynum, N. C.: There can be no reason why the South, especially along the Piedmont section, should not hold its own and succeed as well as any part of the United States. The climate, the cotton at hand, the health of this section, in fact almost everything insures success on this line. It is already a success. We sell at home.

Griffin Manufacturing Co., Griffin, Ga.: We believe the South is the best place in the world to manufacture not only coarse cotton goods, but fine cotton, and that a large increase is only a question of time and money at small interest. We have in the past sold considerable goods for shipment to China and South America, and were it not for the lack of direct shipping and our very high tariff, I am convinced the South could and would build up a large foreign trade in cotton goods.

Albion Manufacturing Co., Mt. Holly, N. C.: Those who have tried fine yarns have been successful; others are preparing for it. The weavers of fine cloth have met with success. The mills recently built in the South have been planned and equipped by competent engineers, and the expense of maintaining and operating has been reduced to a minimum.

Lauraglen Mills, Shelby, N. C.: Fine yarns, 30s to 40s, are being successfully made in the South, and the tendency is in that direction. The greatest hindrance the spinner has to encounter is the practice of weavers and commission merchants to cancel orders for yarns whenever it suits their interest, that is, on a declining market, and at same time compel the spinner to deliver on an advancing market all yarns previously ordered. We are not shipping to foreign markets, but some cloth is shipped to China and Japan by some of the large weaving mills of the South. We need better shipping facilities to South America and resident agents abroad to fully understand the style and character of goods wanted. When the tariff is fully settled and properly adjusted our import as well as export trade will improve with the mutual exchange of commodities.

The Georgia Manufacturing Co., Gainesville, Ga.: The South can manufacture fine goods more cheaply than the East. The expense of living is much cheaper than in the East, and labor is consequently cheaper. We lack skilled management more than skilled labor.

Stanley Creek Cotton Mills, Stanley Creek, N. C.: We think the South possesses wonderful advantages in all kinds of cotton manufacturing, and expect to see at no great day, with our cheap raw material, mild climate, fine water-power, abundant

coal fields and cheap and good labor, great advances in all lines of cotton manufacturing. We think the United States should give subsidies to transportation companies until our trade is introduced and firmly established, and then they may be withdrawn.

The Worth Manufacturing Co., Worthville, N. C.: The South can manufacture fine goods as well and more cheaply than it can be done at the North, and it will be done ere many more years pass.

Tuscarora Cotton Mills, Enfield, N. C.: It is our opinion that the vast exporting of cotton will soon cease, as foreign countries are increasing the growth of cotton, and the South will continue to increase the manufacturing of cotton as foreign demand for raw cotton slacks, and that fine grades will be made as experts in the manufacture increase, and that the fine grades can be made here to better advantage, because there is more best grade raw material to select stock from, and arrangements can be made to have it always fresh stripped from the seed.

Forsyth Manufacturing Co., Forsyth, Ga.: The South can manufacture cotton goods cheaper than any other section of America. Labor is cheap and abundant and of good quality, active and intelligent; fuel cheaper than other sections; all we ask is the tariff off on cotton and wool machinery. We have never shipped to foreign countries; cannot supply the American markets. If we had low duty on machinery we could compete with the world in cotton manufacturing either in coarse or medium fine goods.

Jonesboro Cotton Mills, Jonesboro, Tenn.: It is not a theory that confronts us as to whether we can manufacture finer goods, but it is an unalterable condition that we must. With natural advantages we possess there is no reason why we should not compete with (in some respects) the more favored mills of the New England States on finer goods than we at present are making.

Thomas M. Holt Manufacturing Co., Haw River, N. C.: The labor of the South can be trained to make any grade of goods, and we think the most inviting part of the field is on finer goods.

Monbo Manufacturing Co., Monbo, Catawba county, N. C.: Good opportunity is now, and, with enlarged field for selling, success can be had—will be. Foreign trade can be improved by doing what is right in regard to tariff. Let the government get revenue and the mills will get trade. Forget protection, but get the taxes, and protection will take care of itself and foreign retaliatory tariff prevented. We run day and night spinning and carding, preferring night run for weaving. Plaids went into the ground, and we concluded some time since would not help dig them out.

Cherokee Falls Manufacturing Co., Blacksburg, S. C.: The South is making fair progress in the way of manufacturing finer goods and will, no doubt, make further improvements in this direction.

Hope Mills Manufacturing Co., Hope Mills, N. C.: Give the country high tariff and labor high wages; all will be well.

Louisville Cotton Mills Co., Louisville, Ky.: We do not know what the South will do when the changes in tariff take effect.

Newnan Cotton Mills, Newnan, Ga.: We are so rushed with filling orders for ball thread and other stuff that we can't find time to give our views at all.

Batesville Mills, Batesville, S. C.: The way to make fine goods is to make them. The cotton is here and so is the help, as good as in New England or anywhere else. We think the fine-goods mills in the South are doing better today than the coarse ones. The Wilson tariff bill is the only trouble with any kind of cotton goods now.

Wahoo Manufacturing Co., Newnan, Ga.: We think the South has all the advantages for making and finishing fine goods. Most of our factories depend on East and West to get rid of yarns. If the yarn were finished in cloth or something else we would have a good home trade and save a great deal in commissions. Our trade is all home.

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With a view to mutual advantage, we invite correspondence with all mills and factories intending to purchase Steam Plants, Shafting, Pulleys and Fittings, Outfits of Pipe and Pipe Covering, Fire Brick, etc. We have excellent connections with manufacturers and can save money to buyers.

To farmers and mill men we offer Lane, Liddell and Farquhar SAW MILLS, ENGINES, BOILERS, etc. Headquarters for South Carolina for Hancock Inspirators, Excelsior Injectors and Disston Saws.

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Roller, Slasher and Clearing Cloths

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CHARLOTTE MACHINE COMPANY,

Sole Southern Agents for

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Dealers in Machinery.

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C. & G. COOPER & CO.'S Corlias Engines; High
Pressure, Triple Expansion, Compound and Con-
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Complete Steam Plants from 25 to 3000 Horse Power.
Automatic Sprinklers for Fire Protection.

JONES & LAUGHLIN'S Cold Rolled Steel Shafting,
Compression Couplings, Hangers,
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Slashers, Slasher Warpers, Size Kettles, Cloth Brushing
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Estimates Given and Contracts Made for the Complete
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Easton & Burnham Machine Co.
Manufacturers of
Improved Upright Spoolers
Cop, Skein or Bobbin,
Doubling Spoolers,
New Self-Oiling Spooler Spindle.

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Manufacturers of
The "Hill" Roving Frames,
with Latest Improvements.

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Globe Machine Works,
Manufacturers of
The Denn Warper, with Double Linker,
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Electric Stop Motion. Baling Warpers.

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Patent Cotton Openers,
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We Have Unequalled Facilities
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Roller, Slasher and Clearing Cloths
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GENERAL TEXTILE MILL FURNISHERS

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*Special Attention Given to Furnishing New Mills Complete.***A FULL LINE OF SUPPLIES ON HAND.**

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Foundry, Machine and Boiler Works,

Store above Passenger Depot.

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Mill Machinery and Supplies

FOR COTTON, SAW, OIL AND FERTILIZER MILLS.

HIGH-GRADE BOILERS, Tanks, Stacks, Factory and Mill Castings, Shafting, Pulleys, Bridge and Building Iron and Steel Girders, Columns, Bolts and Railroad Castings, Mill and Railroad Supplies, Belting, Hose, Packings, Piping, Valves and Injectors, Steam Pumps, etc. Get our prices before you buy. We cast every day. Capacity for 300 hands. Will give plenty of good references.

TRADE MARK.

AEROPHOR**SYSTEM OF AIR-MOISTENING**

Adopted by the Representative Textile Manufacturers of this country. Postal Brings Full Particulars.

Address Aerophor, 111 Pine St., Providence, R. I.

SAVOGRAN

Cleans Wool, Mill Floors, Anything.

INDIA ALKALI WORKS, Boston.

Cotton Mill Specialties.

Drawing on Rig for Card Clothing,
Iron Doffing Boxes, Shafting,
Hangers, Pulleys.

Repair Castings for all parts of Mill
Work.

Gears cut from best blanks.

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General Line Machinery.

Corliss and Slide Valve Engines,
Return Tubular Boilers, Steam
Pumps, Heaters.

Machinery of all kinds for working
Gold Bearing Ores.

Stamp Mills, Pumps, Hoists,
Roasting and Chlorination.

THE FUEL ECONOMIZER CO.

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Sole makers in the United States of

GREEN'S IMPROVED PATENT FUEL ECONOMIZER.

This apparatus heats the feed water to a temperature very much above boiling point by the waste gases escaping from boiler flues, thereby effecting a

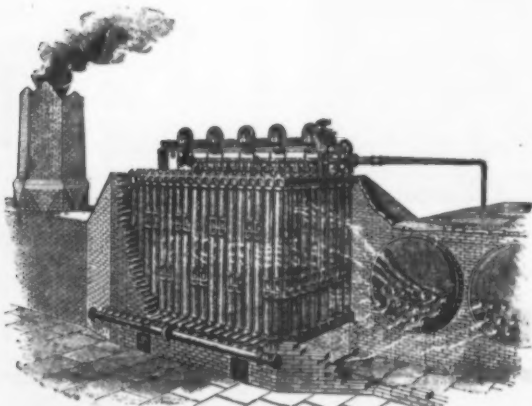
GREAT SAVING IN COAL.

Can be Applied to any Type of Boiler without Stoppage of Works.

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Cotton Mill Engineering**A SPECIALTY.**

Steam and Water Power Plants Designed, Sur-
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Engineering in all its branches

Plans and Specifications for all classes of Archi-
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Manufacturers of HIGH GRADES



Cylinder, Engine,
Spindle *and* Loom Oils.

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Our PERFECTION SPINDLE OILS are excelled by none.

OUR SPECIALTIES

Colophine Cylinder Oil,
Colophine Engine Oil,
Perfection Spindle Oils.

LIGHT AND HEAVY.

Samples Furnished Free on Application.

217 South Street, = = BALTIMORE, MD.

CORRESPONDENCE SOLICITED.

The Greatest Improvement in Cotton Spinning Since Arkwright's Time!

The Patent Metallic Drawing Roll

It is now recognized by practical cotton-mill men at home and abroad, and by scientists and experts, that our PATENT METALLIC DRAWING ROLL strikes so at the very heart of cotton manufacture that no mill can afford to run without it. Indeed

**The Patent Metallic Roll is Superseding the Old Style
Leather Covered Roll on all Machinery and
On Every Process up to the Spinning Frame,**

and we shall have it on Spinning in due time. We take pleasure in giving full particulars to all mill-men who write us for the same. Correspondence solicited. Let us refer you to mills North and South, perhaps in your own vicinity, where you can

SEE THE METALLIC ROLLS RUNNING

ON

Railway Heads, Sliver Lap Machines, Drawing Frames,
Comber Draw Box, Slubbers and Speeders, Intermediate
and Roving Frames, Jack Frames or Fly Frames.

TEN STRONG POINTS OF MERIT.

1. The PATENT METALLIC ROLLS are perfectly made being ground down to extreme accuracy in size; hence we start with and maintain at all times a perfect Roll, working without friction on collars, which will last almost indefinitely.
2. The bite of the Roll is positive, and the draft direct and positive, thus requiring less weight and less power.
3. The Rolls running on collars without friction admit of sufficient space to allow perfect attenuation of the sliver without injury, and possess all the advantages of a leather-covered roll, with none of its disadvantages.
4. The licking up from electricity and sticky weather is entirely overcome.
5. The imperfect or "cut-work," arising from imperfectly varnished rolls, or dry rolls because

- of lack of oil, is entirely eliminated.
6. The cost of roll covering, roll varnishing, delays because of sliver breaking down, licking up, and consequent waste are saved.
7. The product is increased and quality improved. On railways and drawing, product is increased 25 to 35 per cent.
8. Considerable more leaf and dirt are extracted from the sliver.
9. The saving in roll covering is such that on roving frames, where anything like careful attention is paid to keeping the covers in good shape, the full cost of the metallic system will be saved in a few years.
10. The quality of the product is much superior, producing yarn of greater evenness and strength.

THE PATENT METALLIC ROLL IS INDISPENSABLE FOR
FINE OR COARSE MILLS,
WHITE OR COLORED WORK,
LONG OR SHORT STAPLE,
CLEAN OR DIRTY COTTON.

ADAPTED TO ANY MACHINE. The PATENT METALLIC ROLL is furnished for any make of the various machines above enumerated now in use.

FOR OLD MACHINERY. With this Roll much machinery of this class can be run with profit for years, which otherwise would have to be thrown out. The particulars we require for filling orders for old machinery are very simple, and there is no difficulty whatever in equipping such machines with the Patent Metallic Roll to the perfect satisfaction of mill managers. We do a very large business in equipping old machinery.

FOR NEW MACHINERY. The PATENT METALLIC ROLL is usually ordered through the builders of such machinery. All the leading builders and importers of the classes of

machines named are agents for the Patent Metallic Roll, and we have furnished and are furnishing them with Metallic Rolls for many of their frames. In fact, new machinery that is ordered without Metallic Rolls is now the exception. No one can afford to buy new machinery without this system, as the increased cost is earned many times over.

WE INVITE CORRESPONDENCE from all interested, whether owner, agent, treasurer, manager, superintendent or carder. It is a pleasure to send catalogue, calendar, memorandum book, etc., to our patrons.

TO OTHERS, we send a pocket memorandum book for four cents, the same with plain leather case or vest pocket book for fifty cents, or with your name printed in gold on the cover for \$1.

Address all Communications to

**THE METALLIC DRAWING ROLL COMPANY,
INDIAN ORCHARD, MASS.**

SOLE PATENTEES, EXCLUSIVE OWNERS AND ONLY MANUFACTURERS.

CAUTION.—The Patents held by this Corporation cover every description of Metallic Rolls so separated or adjusted as to perform the function of drawing or elongating the fibres of cotton or other material preparatory to twisting or spinning the same. Consequently, whoever makes, sells or offers for sale, or uses or has in his possession, any infringing devices with intent to use the same, will be promptly prosecuted to the utmost extent of the law for damages.

COTTON-MILL HELP.

Plenty of White Laborers—Finer
Goods Being Made.

Editor Manufacturers' Record:

I think the South has the following advantages over New England in the manufacture of cotton goods: Better climate, nearness to the cotton fields, longer hours of labor, plenty of help (all native) and no unions or strikes. While our labor is not so well skilled, perhaps, it is cheaper, and one about offsets the other. Possibly our help is as well skilled for the class of work they do as those in New

England, and I notice that whenever a new mill starts up on finer grades there seems to be no difficulty in procuring plenty of native help to run the mill successfully. Here in North Carolina there is over twice as much help as our present mills require. Every new mill gets more help than it needs, on a few days' notice, without taking any from other mills. For every vacancy we have at least four or five applicants. Quite a number of Southern mill hands are thrifty and own their own houses, and a majority are good moral people and gradually improving. There is no danger of the supply of native

white help becoming exhausted; their number is being continually added to by the small tenant farmers and by the children of our mechanics. Even if the negro help were reliable and could be taught (both of which are doubtful), there will be no room for them in Southern mills for the next 200 years, though any philanthropist who wants to benefit the colored race and break himself would be perfectly welcome to come down here and employ them. There is a good deal of "rot" about the talk of leading New Englanders "that the South will never be able to compete with New England in the finer grades." Let them pos-

sess their souls with patience. Like a boy passing through a graveyard, they are whistling to keep up their courage. We have a new mill here on No. 40 yarn whose product sells as well as that of any New England mill. The main drawback now to finer grades which require staple cottons is the railroad discrimination from staple points in favor of New England and against North Carolina and South Carolina. This will either be changed, or mills for fine grades will be built at points where long staples are raised. No. 60 yarn will soon be as common in the South as No. 20 is now.

MILL TREASURER.

PHOSPHATES.

Phosphate Markets.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, March 8.

In the local phosphate market the volume of trade continues light and business generally dull. Manufacturers of fertilizers have generally made their purchases in advance, and there is very little remaining to be done in the local trade. From producing points the reports are generally favorable for extended development, both in South Carolina and Florida. The land and river miners of South Carolina are at present very busy, and a good output is expected. In Florida the phosphate industry is showing the usual activity, and the shipments from the various ports for the current month are expected to be very large. The receipts of phosphate in the local market for the week were 804 tons by schooner *Blanche Hopkins* and 800 tons by schooner *M. Luella Wood*, both from Charleston. The receipts for the month of February aggregated 5326 tons, and since January 1, 1894, they amount to 10,773 tons. The list of values are unchanged, and quotations are as follows: South Carolina rock \$5.00 for Charleston, \$4.75 for Ashley river and \$5.00 to \$5.25 for Ashepoo, S. C., all f. o. b. Florida rock is steady at \$5.25 to \$5.50 for 60 per cent. river pebble, \$5.50 to \$6.00 for 65 per cent. and \$6.25 to \$6.50 for 70 per cent., all f. o. b. Charlotte Harbor or Tampa.

FERTILIZER INGREDIENTS.

The local market has ruled quiet during the past week, and, with a moderate trade demand, prices of ammoniates have remained steady. Azotine is quoted \$2.45 to \$2.50 delivered, basis Baltimore and Philadelphia freights. For the lower grades of tankage there is a light demand, and prices steady. Nitrate of soda is in fair demand, with a good supply.

The following table represents the prices current at this date:

Sulphate of ammonia.....	\$ 3 90@	\$4 25
Nitrate of soda.....	2 00@	2 05
Roof meal.....	2 35@	—
Wood.....	2 50@	—
Asotine (beef).....	2 45@	2 50
Asotine (pork).....	2 45@	2 50
Tankage (concentrated).....	2 30@	2 35
Tankage (9 and 20).....	\$2 20 and to cts.	—
Tankage (7 and 30).....	19 00@	20 00
Fish (dry).....	27 00@	28 00
Fish (acid).....	18 00@	20 00

Phosphate and Fertilizer Notes.

The phosphate industry promises to be very active at the port of Punta Gorda, Fla., during the current month. The steamship *Albania*, for Bristol, takes out 1000 tons of phosphate. The steamship *Laconfield* and the schooner *Ada Baily* arrived on the 1st inst., and the former will take 3000 tons and the latter 1000 tons. The *Celina* cleared last week for Baltimore with 900 tons. The British steamer *Apex*, due on the 10th inst., will clear with 3000 tons. Several steamers and barks in the phosphate trade will arrive to load during the first half of March, which will make the gross shipments for the month the largest in the history of the port.

STATISTICS furnished by Secretary of State Tindall, of South Carolina, in regard to the fertilizer industry of that State, as shown by the yearly sale of fertilizer tags, gives the following tonnage distributed: For 1890, 170,280 tons; 1891, 227,276 tons; 1892, 144,435 tons; 1893, 200,975; 1894 to the 1st inst., 91,000 tons. Taking the amount of fertilizers sold after the present date in previous years as a basis, it is estimated that the sales for the current year will reach about 170,000 or 180,000 tons.

The sale of fertilizer tags by the Alabama department of agriculture from October 1, 1893, to February 28, 1894, amount to \$1,766.77, and for the corresponding period in 1892-93 they aggregated \$1,740. The price was reduced by the last general assembly from fifty cents to twenty cents per ton, and at the reduced fig-

ures it is shown that the receipts are a little more than half what they were last year.

A. B. PRICE, of Ocala, and others are erecting a new phosphate plant at the new town of Newberry, Fla., on the Savannah, Florida & Western Railroad leading from High Springs south.

THE total shipments of phosphate from Port Tampa, Fla., for the month of February were 4570 tons. Vessels loading on the 1st inst. were the British steamships *Glendower* and *North Briton*, the whale-back steamer *Joseph L. Colby* and the bark *E. A. Sanchez*.

MR. C. H. SMITH, secretary of the Jacksonville Board of Trade, has received replies from several of the large phosphate companies of the State, indicating that they would send delegates to the convention on March 13. It is thought there will be representatives present from nearly all the companies of the State.

THE Ocala & Blue River Phosphate Co. has leased L. Buck & Son's old log road, and will commence hauling phosphate in a few days at the rate of fifteen or twenty cars a day.

THE Edisto Phosphate Co., of Charleston, S. C., sent a large order to Columbia last week for 8000 fertilizer tax tags for immediate use.

Packing Goods for Export.

The report of United States consuls for January, 1894, is, like its predecessors, especially valuable to exporters and others interested in foreign commerce. The packing of goods for shipment to foreign countries and the opportunities presented for the development of business with Europe, South America, Central America, the West Indies and other sections are two features worthy of careful study. The consuls all agree that foreign shippers are far more careful than Americans in preparing staple articles for export. Several of them elaborate on the damage done the United States cotton trade by the poor baling, and the report contains the illustrations given several weeks ago in the MANUFACTURERS' RECORD, showing the difference in American, Egyptian and Indian bales as they arrive in Europe. American trade in flour, petroleum and drugs also suffered from the way in which the shipments are packed. In summing up the complaints the report says:

"The great lesson taught us by the reports is that in many of the countries from which they have been written, and especially in China, Africa and in the South American countries, where our products should find abundant sale, peculiar conditions exist which must be carefully studied and conformed to if we are to have a large share of the trade. Europeans take excessive pains to learn the tastes and whims of the various classes of people in these countries, and also the condition of their ports, their roads and their carrying facilities, in order to prepare the kind of goods they desire and to pack them to suit the requirements of their localities. It is hoped that these reports may stimulate and aid our own producers to imitate their example. A good general rule of packing is to follow implicitly the directions of purchasers, and it is a rule which those observe who have been for a considerable period engaged in foreign trade. It is true, as one of the contributors to this manual declares, that good packing and the proper consignment of goods result from a dependence upon export trade."

THE Cedartown Board of Trade has been organized at Cedartown, Ga., for the purpose of advancing the material interests of that city. Committees on advertising, transportation, new enterprises, etc., have been appointed. M. J. E. Good was elected president, and E. B. Russell, secretary.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Markets for Cottonseed Products.

NEW YORK, March 6.

Our market for cottonseed oils is easier, with prices at least one-half cent lower than last week. Late cable advices from Rotterdam indicate very dull times over there and prices hardly quotable. From other parts of Europe there is some demand for prime summer yellow oil at thirty-two cents, and as that price is also bid by local soapmakers for the off-grade summer yellow, we are reminded of the season of 1890-91, when prime and off grades sold at the same price in this market under the stress of heavy receipts. Receipts of oil now are not very large, but they are, especially for refined, rather heavier than the home and foreign trade seem to be able to take care of. Local lard refiners complain about dullness of trade in the compound product and will buy only barreled oil on the spot for immediate wants. For loose oil at the South only the equivalent of the price of barreled oil on the spot would be obtainable, and, with the West out of the market, prices at the South are receding steadily. Today we quote prime crude in Mississippi valley twenty-four and a-half cents bid and twenty-five cents asked; in Texas crude oil is freely offered at twenty-four cents, and in the Atlantic coast States offers range all the way down to twenty-three and a-half cents. These prices are for loose oil f. o. b. mill in buyers' tanks. The following prices are for barreled oils on the spot: Prime crude, twenty-seven and a-half to twenty-eight cents; off crude, twenty-five and a-half to twenty-seven cents; prime summer yellow, thirty-two and a-half cents; off summer yellow, thirty-two to thirty-two and a-half cents; prime summer white, thirty-six cents; prime winter yellow, thirty-nine cents; cottonseed-oil soap stock, one and three-eighths cents. Cottonseed meal has declined at the South and is quoted considerably lower to purchasers in the Eastern States, owing to the drop in east-bound rates. On the spot prime cottonseed meal is offered at \$22.50 per ton of 2000 pounds ex-dock. ELBERT & GARDNER.

ROTTERDAM, February 19.

The market for cottonseed oil remains dull and depressed here, and the demand is most unsatisfactory. During the last week prices have declined considerably. The arrivals are not very important. The stock here is not too large, but because the weather has been soft and wet here this winter the butterine manufacturers could not mix much cotton oil. The quotations are now thirty-two guilders for very choice qualities, thirty guilders for good brands and twenty-five to twenty-six guilders for inferior quality, but it is impossible to sell at these figures, and a party who wishes to sell is obliged to accept bids far below these prices. The butter-makers are not inclined to purchase unless they may have the goods some guilders below the market prices. It seems that the position in America is also very unsatisfactory, and that it is quite impossible to sell at the quoted prices. During the last days of the week the weather was somewhat colder than it has been, and perhaps we may have a somewhat better demand for the article in a short time. The prices of other grease articles are firmer, and prices of oleo oil have advanced on some qualities, and at a base of sixty guilders for choice quality a large business has been done. If the cold weather continues some weeks the prices of cotton oil will surely follow the advancing market of oleo oil. It seems that the crop of cottonseed has been very

large this season, and that there are still very large quantities of cottonseed oil unsold in America. Because it is also difficult to sell this article in America, it certainly will be to the interest of the oil refiners to consign their goods to Holland, and, although the market is also very dull here, the prices will certainly go up here at the first demand for the article, the stock of unsold cottonseed oil being very limited here.

G. W. SANCHES.

To Deepen Charlotte Harbor.

The convention of the Florida Pebble Phosphate Miners' Association, recently held at Punta Gorda, was of unusual interest from the fact that the association has determined to have Charlotte harbor deepened so that large vessels can come up to Punta Gorda. As this is one of the greatest phosphate-producing centres of Florida, the advantages of having a deep ship channel to the sea are manifest. The following resolution was adopted:

Resolved, That it is essential to the commercial and industrial interest of the people of the State of Florida, as well as to the Southern States of the Union, that Charlotte harbor be deepened so as to admit sea-going vessels of greatest draft between Boca Grande and the town of Punta Gorda. That as phosphate miners and exporters, we appeal to the senators and congressmen of the State of Florida to use every means within their power to secure a suitable annual appropriation for the purpose of deepening and maintaining said harbor, to the end that the commerce of the State of Florida and the Southern States of the Union be facilitated and increased.

At the entrance to the harbor there are nearly seven feet of water at low tide, sixteen feet for about twelve miles and thirteen feet for about six miles up the harbor. The favorable impression left by this visit of the association, it is said, will result in the shipment of large quantities of phosphate in future diverted from ports that have hitherto enjoyed that privilege.

BALTIMORE is noted for its important mercantile houses of long standing, but few are more widely known than the establishment of W. C. Robinson & Son, of 217 South street. This is not only one of the oldest firms in Baltimore, but one of the oldest in the country in the business of manufacturing and selling oils. The business was started on the premises still occupied by the firm in 1832, by Thomas Peniman & Co., the company being W. C. Robinson, father of Edw. A. Robinson, who is now sole proprietor of the business. Mr. Peniman died in 1838 and W. C. Robinson continued the business in his own name until 1868, when his son was admitted as a partner, and the firm name was changed to W. C. Robinson & Son, and has continued as such ever since. Mr. W. C. Robinson died in 1871. The building at 217 South street is a large one, four stories high, and in it, besides their offices, they have large tankage facilities and their oil presses. They also occupy the warehouse No. 506 Lombard street for storage purposes. The firm has always done a large and successful business, selling their goods through the South and having an extensive home trade. Their full-page advertisement in this issue will convey some idea of the extent and character of their business in oils. Southern cotton mills and others needing oil will find it of interest to study their advertisement.

TUSCALOOSA, ALA., intends to have a commercial club to further its industrial progress, and last week a meeting was held to discuss the subject. General plans for the new institution were discussed, and a permanent organization will be effected this week. Mr. Geo. A. Searcy is temporary secretary.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department, on pages 91 and 92.]

Lumber Directory.

Readers of the MANUFACTURERS' RECORD who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

LUMBER MARKET REVIEWS.

Baltimore.

OFFICE MANUFACTURERS' RECORD, 1
BALTIMORE, March 8.

Business during the past week has been quiet, and throughout the lumber market there is little or no improvement. The demand from yardmen is very light and only to supply immediate necessities. Receipts of yellow pine continue moderate, and the supply on hand at present fully ample for the demand. In air-dried yellow-pine lumber there has been a moderate volume of business, and prices are about steady, with no change in the general list. The market for hardwoods is unchanged, and while there are some inquiries from out-of-town buyers, there is a very limited actual business. Local buyers are purchasing very sparingly and only as occasion requires. Commission men look upon the situation as uncertain, and while business at this period of the season is usually quiet, they look for more activity later on. Planing mills and box factories are doing a light business, but nearly all are running on whole or half time.

The following table represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE.	
5-4x10 No. 1, kiln dried.....	\$15 00@17 00
5-4x12 No. 1, " " " " " " " "	17 00@18 00
4-4x10 No. 1, " " " " " " " "	19 75@
4-4x12 No. 1, " " " " " " " "	20 75@
4-4 narrow edge, No. 1, kiln dried.....	16 00@17 00
4-4 wide edge, " " " " " " " "	21 75@
6-4x8, 10 and 12, " " " " " " " "	20 00@22 00
4-4 No. 1 edge flooring, air dried.....	14 00@15 50
4-4 No. 2 edge flooring, " " " " " " " "	13 50@15 50
4-4 No. 1 12-inch stock, " " " " " " " "	14 00@15 00
4-4 No. 2 " " " " " " " " " "	12 50@13 50
4-4 edge box or rough wide.....	8 50@9 50
4-4 " " " " " " " " " " " "	8 50@9 50
4-4 " " " " " " " " " " " "	8 50@9 50
4-4x12 " " " " " " " " " " " "	9 50@10 00
3/4 narrow edge.....	6 00@7 00
3/4 wide.....	8 50@9 50
3/4 10x16 wide.....	9 50@10 00
Small joists, 2 1/2-12, 14 and 16 long.	7 50@8 50
Large joists, 3-16 long and up.....	9 50@10 00
Scantling, 2x3-16 and up.....	9 00@10 00

WHITE PINE.	
1st and 2d clear, 4-4, 5-4, 6-4 and 8-4.	48 00@51 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 00@44 00
Good edge culls.....	34 00@35 00
Good stock.....	17 00@17 50

CYPRESS.	
4-4x6, No. 1.....	18 50@20 50
4-4x6, No. 2.....	14 50@15 00
4-4x6, 16 feet, fencing.....	11 50@13 00
4-4x6, rough.....	9 50@10 00
4-4 rough edge.....	9 50@10 00
4-4 edge, No. 1.....	18 00@20 00
4-4 " No. 2.....	12 50@13 50

HARDWOODS.	
Walnut.	
5-8, Nos. 1 and 2.....	65 00@75 00
4-4, Nos. 1 and 2.....	80 00@90 00
5-4, 6-4 and 8-4.....	85 00@95 00
Newell stuff, clear of heart.....	85 00@100 00
Culls.....	20 00@30 00

Oak.	
Cabinet, white and red, plain-sawn and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	30 00@35 00
Quartered white, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	52 50@55 00
Culls.....	10 00@15 00

Poplar.	
Nos. 1 and 2, 5-8.....	25 00@26 00
" " " " " " " " " " " "	28 00@31 50
Nos. 1 and 2, 6 and 8-4.....	32 00@33 00
Culls.....	14 00@15 00

SHINGLES.	
Cypress, No. 1 hearts, sawed, 6x30.	7 50@7 75
No. 1 hearts, shaved, 6x30.....	5 50@6 00
No. 1 saps, shaved, 6x30.....	5 00@5 50

LATHS.	
White pine.....	2 65@2 70
Spruce.....	2 15@2 25
Cypress.....	2 15@2 25

Norfolk.

[From our own Correspondent.]

NORFOLK, VA., March 5.

While there is by no means any spirited demand at the moment for lumber, the general market continues to improve steadily. Manufacturers and commission men generally look for considerable business during the month of April, and even now there are many features which impress the general outlook as favorable. Nearly all

the mills here and throughout the saw-mill section are running again, and among the smaller mills in some sections there has been a scarcity of logs, owing to the state of the roads, which interfered with hauling. In kiln-dried yellow pine orders are coming in more freely, but the demand is only moderate, while prices hold very steady for all desirable stuff. There is a fair volume of business in air-dried lumber, and prices continue easy, with moderate receipts and stocks by no means excessive. There is a better business reported among the planing mills both at this point and at adjacent centres. Most of the mills are running on full time, and orders are more numerous for this class of material than they were last month. At Suffolk builders are busy, and there are numerous signs of a revival in business. A number of manufacturing and industrial concerns have resumed work. The Cramer Planing Mills and the Gay Manufacturing Co.'s mills are now busy.

Charleston.

[From our own Correspondent.]

CHARLESTON, S. C., March 5.

The tone of the market for lumber has shown somewhat more activity during the past week, and the demand, while not very decided, continues to improve. In milling sections adjacent to this port there seems to be a better outlook, and mills are gradually resuming operation. Prices for all desirable grades of lumber are steady, but show a narrow margin of profit. There is very little foreign trade, and the bulk of the shipments are for coastwise ports. During the week the schooners Anna L. Mulford cleared with 440,000 feet of lumber, Clara E. Bergen with 380,000 feet, Peter C. Schultz 324,000 feet, and by steamer 12,000 feet, all for New York. The schooner May Sanford cleared for Boston with 370,000 feet of lumber, and the schooner Howard H. Hanscom with 540,000 feet for Philadelphia. The total shipments of lumber since September 1, 1893 aggregate 21,756,265 feet for domestic ports and 1,960,000 feet for foreign ports, making a total of 23,716,265 feet, against 25,440,788 feet for the corresponding period last year. The market closes steady, with a moderate demand, and prices unchanged. Freights are generally quiet. The charters reported were schooners H. H. Hanscom, for Philadelphia, crossties, forty-four feet, fourteen cents; Nettie Shipman, for New York, lumber, and Young Brothers, to Boston, lumber on private terms. The J. H. Parker and J. H. Teague were taken for New York to load crossties; terms private.

Savannah.

[From our own Correspondent.]

SAVANNAH, GA., March 6.

The week just closed has been quiet, and the lumber market has shown very little activity, still the inquiries are more numerous, and prospects for a better business in the near future are fair. Reports from the saw-mill section of the State adjacent to the city are more encouraging, and many mills that have been idle during the past six months are now beginning to operate. The shipments of lumber during the past week were to New York, Boston, Philadelphia and Baltimore, and aggregated about 680,000 feet. The total shipments for the month of February amounted to 4,093,724 feet of lumber and 10,580 crossties. Prices continue very low, but steady for all desirable material. Easy sizes, \$11.25; ordinary sizes, \$11.00 to \$14.00; difficult sizes, \$15.00 to \$18.00; flooring boards, \$14.50 to \$22.00, and ship-stuffs, \$16.50 to \$25.00. Lumber freights continue quiet at unchanged rates. The rates from this and nearby Georgia ports are quoted at \$4.00 to \$5.00 for a range including Baltimore and Portland, Me. Railroad ties, basis forty-four feet, fourteen cents. Steamer rates to New York and

Philadelphia \$7.00, to Baltimore \$5.00 and Boston \$8.00.

Mobile.

[From our own Correspondent.]

MOBILE, ALA., March 5.

There is at present a more promising outlook for lumber and timber than for some time past, and the demand is steady, with a good general inquiry. The timber trade is looking up, and those in the business are more hopeful of better times during the spring and summer months. Hewn timber is steady at ten and a-half cents to eleven cents per cubic foot, and sawn timber firm at eleven and a-half cents to twelve cents per cubic foot. The lumber business is showing signs of decided improvement, and the demand is quite pronounced and comes mainly from Central and South America, Mexico and the United Kingdom and Continent. The clearances last week were 1,631,777 feet, and since September 1, 1893, they amount to 33,257,785 feet, against 40,702,085 feet for the corresponding period last year. The shingle industry is in better shape than for some time past, and manufacturers are very hopeful of a good trade in future. The red-cedar shingles manufactured here have a high character in Ohio, Indiana, Illinois and other States, and this is the largest cypress-shingle-manufacturing centre in the country. The prospect for logs is good at present, and the late overflows have brought out large quantities. The mills are all running except the new one of the Mobile Shingle & Manufacturing Co., which will cut 250,000 per day and will start up as soon as the logs arrive.

New Orleans.

[From our own Correspondent.]

NEW ORLEANS, LA., March 5.

The various conditions surrounding the lumber and timber industry of this port and adjacent lumber points of Louisiana and Mississippi point to a reaction in the near future, and it is thought prices will show a higher range in the next sixty days. Yellow pine has reached a point that leaves a narrow margin of profit, and the cypress trade is very quiet, but with the large number of buildings to be erected and the prospective demand from other sources it is thought that values will soon show a hardening tendency. Oak staves and oak plank are in good demand at low figures, the continental market showing easy values on account of a sharp competition. Crossties are in fair demand, several contracts having been recently closed, the firm of G. A. & W. W. Louque having closed one of 100,000 feet of crossties, to be delivered at Sauve, eight miles north of the city. Advices from points along the line of railroads entering this city are more encouraging, and saw mills that have been closed down are gradually resuming. Capt. T. K. Edwards, lumber commissioner of the Illinois Central Railroad, in reviewing the lumber industry, says: "I find lumbering interests in the Yazoo delta much brighter than usual. For the past few months during the financial depression things looked pretty dark. Large quantities of lumber were piled up awaiting a movement, but now orders are beginning to come in, and there will be a better business. The Yazoo delta furnishes the world with a very valuable yellow pine and cypress which will always find a good market, though the times be ever so hard." The Cypress Lumber Mills Co., located at Harvey's Canal, will operate its mills on the 1st of April, they having been closed down for nearly six months. Its supply of lumber on hand is about 4,500,000 feet, and it reports a good demand and is very much encouraged with the general outlook for future trade. The Jackson Saw Mill on the river-front in the lower part of the city has undergone a radical change, the capacity having been increased and new

machinery added. Mr. C. E. Dirmeyer, of the Mechanics, Dealers and Lumbermen's Exchange, reports quotations for cargo lots of timber and lumber as follows: White pine timber No. 1 per lineal foot, ten to fifteen cents; scantling, No. 1 \$12.00 and No. 2 \$10.50 to \$11.00; boards, 1x12 clear, \$14.00, and log through \$11.00; merchantable, \$8.00 to \$9.00, and box \$6.50 to \$7.00. The following are the receipts of building materials for the week ending March 2, 1894:

	This week.	This year.	Last year.
Lumber.....	1,332,000	40,266,516	46,944,715
Shingles.....	40,000	2,639,850	3,269,658
Laths.....	88,000	805,000	3,853,300
Bricks.....	198,000	10,213,500	17,873,000
Sand.....	6,900	251,735	267,459
Lime.....	750	35,500	57,300
Fire-brick.....	7,000	179,200	108,000
Oak staves.....	51,200	2,811,013	2,384,681
Cypress staves.....	86,000	2,662,993	1,874,954

Southern Lumber Notes.

THERE is considerable activity at present in the lumber industry around Abbeville, Ga. The Mohrwell Lumber Co.'s mill, located at the wharf, is enlarging its capacity and employing quite a number of hands. The new saw mills of McLeod & Mitchell, at the same place, will soon be completed and have a heavy force at work.

THE Cummer Lumber Co., of Northampton, N. C., has shut down for several weeks, owing to the dullness of the lumber market.

A FIRE at the Hilton Steam Saw and Planing Mills at Wilmington, N. C., on the 26th ult., destroyed the planing mill, dry-kiln, six box cars, offices, a large quantity of dressed lumber and the sash and blind factory. The property was owned by W. S. Parsley, and the loss is estimated at about \$25,000, of which \$15,000 was insured. The saw mill was saved.

AMONG the exports from the port of Jacksonville, Fla., for the month of February were 3,725,000 feet of pine lumber and 250,000 feet of cypress lumber coastwise, and 750,000 feet of pine lumber to foreign ports. The shipments of crossties amounted to 11,300, and of shingles 6000 bundles.

MESSERS. DURHAM & SHEEHAN, who lately established an improved cypress shingle mill at Charleston, S. C., are now in full operation. Their brand of shingles find high favor in New York and other Northern markets, where they are considered among the best obtainable.

THE exports of lumber from the port of Fernandina, Fla., for the month of February amounted to 2,811,797 feet and 1547 cases cedar coastwise, and 1,500,592 feet and 240,150 cypress shingles for foreign ports.

THE Paige Lumber Co., of Aberdeen, N. C., has recently received an order from a Pittsburg firm amounting to nearly 4,500,000 feet of lumber. The mills of this company are in active operation.

IN a recent issue of the North Carolina Agricultural Bulletin, Hon. Walter Clark, of the Supreme Court of that State, contributes an article on "Peanuts," suggested by the articles prepared by Mr. Edward Atkinson which have appeared in the MANUFACTURERS' RECORD. Judge Clark holds that the peanut-raisers could realize far more profit were it not for "combiners" which sell the nuts at several hundred percent more than they pay for them. These "combiners," he asserts, control most of the peanut-cleaning factories, and he advises farmers to club together and build factories in their respective districts.

AN indication of the real estate business at Augusta, Ga., is shown by the sale of a tract of land in that city to J. B. Hair, of Elko, S. C., who will erect a number of houses on the property.

CONSTRUCTION DEPARTMENT.

WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

* Means machinery is wanted, particulars of which will be found under the head of "Machinery Wanted."

* In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ALABAMA.

Aniston-Cotton Mill.—Howard W. Sexton and Julian C. Keith are making endeavors to arrange for the erection of a cotton mill.

Arbacoochee-Gold-mining.—The Blair & Fehr Gold Mining Co., of Cincinnati, has purchased the Lee gold-mining property near Arabacoochee. Col. S. Fehr, of Heflin, can be addressed.

Demopolis-Cotton Mill.—The erection of a cotton mill is talked of.

Demopolis-Electric-light and Water Works.—The city intends to establish an electric-light plant and water-works system. Address the mayor for information.*

Montgomery-Water Supply.—The Capital City Water Co. has awarded contract for the sinking of an artesian well 1000 feet deep.

ARKANSAS.

Jenny Lind-Power-house.—The Western Coal & Mining Co. is constructing a power-house near its mines to cost \$20,000.

Little Rock-Factory.—Chas. T. Ables & Co. have let contract for the erection of a \$5000 factory building.

Little Rock-Gold and Silver Mines.—Gold and silver deposits are said to have been found on Henry Martin's farm near Little Rock.

FLORIDA.

Fernandina-Quarantine Station.—A quarantine station will probably be built on Tiger Island, near Fernandina. For information address Dr. J. L. Horsey.

Gainesville-Cigar Factory.—Manuel Montiel has started a cigar factory.

Gainesville-Phosphate Mines and Plant.—The Alachua Phosphate Co. has purchased the Piedmont Phosphate Co.'s property in Marion and Citrus counties and will develop same at once. A phosphate-mining plant will be erected at once. James M. Graham is general manager of the company.*

Hampton-Bed-spring Factory.—Thomas McCann has established a bed-spring factory.

Jacksonville-Canning Factory.—L. R. Benjamin, of Jacksonville, and a Salem (N. C.) party are arranging to erect a canning factory at Gillen, near Jacksonville.

Lake City-Ice Factory.—Messrs. Lane and Bentley, of Valdosta, Ga., contemplate building an ice factory in Lake City, and have submitted a proposition through A. Y. Hampton.

Newberry (Not a Postoffice)-Phosphate Plant.—A. P. Price, of Ocala, and others are erecting a phosphate plant at Newberry.

Ocala-Cigar Factory.—Senor y Castellanas, late of Gainesville, will establish a cigar factory in Ocala.

Punta Gorda-Cigar Factory.—J. L. Dreggors will increase the output of his cigar factory.

Rochelle-Grist Mill.—The Phifer Moss Factory will put in a grist mill. Machinery has been purchased.

Ther City-Cigar Factory.—Gonzales, Mora & Co. have let contract at \$8600 for the erection of a new cigar factory.

GEORGIA.

Americus-Broom Factory.—T. S. Greene has

purchased complete equipment of machinery for a broom factory, and will at once erect same.

Athens-Electric-lighting.—The city's lighting contract expires in a few months, and there is talk of issuing bonds for its own electric plant. The mayor can be addressed.

Atlanta-Cigar Factory.—The Union Cigar Manufacturing Co. has been incorporated to manufacture cigars with a capital stock of \$10,000. I. Lickenstine, E. A. Nelms and J. H. Akers are the incorporators.

Atlanta-Mercantile.—N. W. Murphy, E. B. Chapman, W. T. Roberts and others have incorporated the Atlanta Grocery Co. with a capital stock of \$25,000.

Carrollton-Cotton Mill.—It is proposed to erect a cotton mill. J. P. Moore can give information.

Carrollton-Cottonseed-oil Mill.—The erection of a cottonseed oil mill is proposed. M. R. Russell, of Carrollton, and J. W. Taylor, of Atlanta, are interested.

Cochran-Canning Factory.—A company has organized to erect the canning factory noted last week. W. H. Mobley can give information.*

Cochran-Cottonseed-oil Mill and Compress.—W. H. Mobley, noted last week in connection with several projected enterprises, is endeavoring to secure also the erection of a cottonseed-oil mill and cotton compress.*

Cordele-Variety Works.—It is said that a Northern party will erect a \$50,000 variety works at Cordele.

Cussetta-Printing Works.—C. C. Minter contemplates establishing a printing office.

Dahlonega-Gold-mining.—Washington Jenkins and Henry Roberts, having obtained permission from the city council, are taking gold ore out of the streets of Dahlonega.

Gainesville-Telephone Lines.—H. R. Smith, Allen Candler and H. L. Richardson have incorporated the Gainesville Telephone Co. with a capital stock of \$10,000.

Gilmore-Distillery.—R. M. Rose, G. B. Stewart, C. P. Johnson and J. W. Birdsong, all of Atlanta, have incorporated the Mountain Spring Distillery Co. to operate distillery at Gilmore.

Macon-Foundry and Machine Shop.—It is said that endeavors will be made to organize a stock company for the erection of a foundry and machine shop for making all kinds of castings.

Macon-Mercantile.—The Hub Co. has been incorporated by Edward Wolff, C. B. Willingham, H. J. Lamar and others with a capital of \$5000 and privilege of increasing to \$50,000.

McDuffie County-Mining.—The Georgia Mining Co. has been incorporated to open mines in McDuffie county. Lyman B. Goff is president, and Geo. R. Stearns, secretary and treasurer; both of Augusta, Ga.

Montezuma-Water Works.—The construction of water works is talked of.

Rockmart-Slate Quarries and Mill.—The parties noted last week as having purchased slate quarries comprise the Georgia Slate Co., and will at once develop quarries and operate mill. Jno. J. Craig is president; J. Van Deventer, vice president; T. L. Van Deventer, secretary and treasurer, and W. L. Craig, general manager. Offices at Rockmart and in Knoxville, Tenn.*

Valdosta-Guano Works, etc.—The parties noted last week as contemplating guano works will organize a company at once to establish plant. Frank Roberts can be addressed.*

KENTUCKY.

Albany-Spoke Factory.—Hancock & Harrison have built a spoke factory.

Louisville-Iron Works, etc.—The Southwestern Iron Works and the Ahrens & Ott Manufacturing Co. have consolidated under the latter name.

Louisville-Barrels.—Chas. J. Mousch, J. B. Dozier, C. Buetsenback, Lawrence Reichart and Henry J. Mousch have incorporated the Mousch-Dozier Barrel Co. with a capital stock of \$50,000.

Monticello-Flour Mill.—Rankin & Sons, of Rankin, are building a flour mill at Monticello. Machinery not purchased yet.

Shelbyville-Electric-light and Water Works.—The Shelbyville Water & Light Co. has about organized, its purpose being to construct the water-works and electric-light plant lately noted.*

LOUISIANA.

Donaldsonville-Foundry and Machine Shop.—Arrangements have been made for the erection of a foundry and machine shop, work to commence at once. The Donaldsonville Land & Improvement Co. can give information.

Dubberly-Woodworking Plant, etc.—Davis & Maunging have purchased W. H. Tatum's spoke works, grist mill and cotton gin and will operate same; will also add fellow mill.

MARYLAND.

Baltimore-Steamboats.—Roger T. Gill, Medford M. Larrimore, J. Hy. Snyder, Robt. M. Spedden and James M. Warwick have incorporated the Eastern Bay & Miles River Steamboat Co. with a capital stock of \$30,000.

Baltimore-Machine Shop.—The Ellicott Machine Co. has secured site and will erect an additional machine shop of the most modern construction after plans now being prepared by Owens & Beiler. One of the new machines to be placed in the shop will have a capacity to finish 70,000 pounds of shafting in ten hours. The Ellicott Company manufactures power transmission, fertilizer and mill machinery and contracts for entire plants.

Hagerstown-Tire Works.—The Punctureless Tire Armor Co. has been organized with a capital stock of \$50,000 to operate the works recently started by S. M. Schindel. Mr. Schindel is president of the new concern.

Hyattsville-Iron Bridge.—The construction of an iron bridge over Eastern branch between Bladensburg and Hyattsville is contemplated. For further particulars address the town commissioners.

Washington, D. C.-Furniture Company.—A charter has been granted to the Julius Lansburgh Furniture & Carpet Co. with a capital stock of \$100,000. W. Andrew Boyd, of Washington, is president; Julius Hines, of Baltimore, vice-president, and G. E. Lewis, of Washington, secretary.

MISSISSIPPI.

Lumberton-Ladder Factory.—J. C. Gardner, of Chicago, has started a step-ladder factory at Lumberton.

McComb City-Ice Factory and Bottling Works.—The ice factory lately noted will be built by the McComb Ice Factory & Bottling Works, Frank Kye, manager. Bottling plant will also be put in.*

MISSOURI.

Kansas City-Coal Company.—M. W. Serat, R. H. Hamilton and M. Serat have incorporated the Southwestern Coal Co. with a capital stock of \$75,000.

St. Joseph-Clothing Company.—R. S. and W. H. Carpenter and J. R. Owens have incorporated the R. S. Carpenter Clothing Co. with a capital stock of \$10,000.

NORTH CAROLINA.

Charlotte-Pump Works.—D. W., Jno. E. and James Oates, J. A. Elliott and W. E. Moffatt are organizing a company for the purpose of erecting works for the manufacture of pumps and heaters. The capital stock is to be \$25,000.

Davidson-Mines.—A report states that Pennsylvania and North Carolina capitalists have purchased four mines from Dr. A. Fuller, of Davidson county, for \$55,000.

Durham-Novelty Works.—R. R. Bridges, T. E. Whitaker, D. W. Whitaker and R. B. Boone have incorporated the Umbrella Drip Co. to manufacture a patent umbrella attachment. The capital stock is \$10,000.

Gastonia-Coffin Factory.—J. D. Brumfield has organized a company for the purpose of establishing a coffin factory.

Greenville-Lumber Plant.—Hines Bros. and S. C. Hamilton, late of New Bern, have purchased saw mill, planing mill and dry kilns at Greenville, and will operate same.

Lexington-Cigarette Factory.—The erection of a cigarette factory is talked of. No names mentioned in connection with the enterprise.

Mooresville-Enlarging Mill.—Templeton, Williams & Co. contemplate increasing the capacity of their flour mill from fifty to 100 barrels daily.

Salisbury-Reduction Works, etc.—Richard Eames, Jr., J. J. Newman and William Brandeth have incorporated the Southern Metallurgical & Mining Co. to erect reduction works, manufacture and sell a chemical fertilizer, etc.

Stoneville-Tobacco Factory.—A tobacco factory will, it is said, be erected. For information address secretary of the Farmers' Alliance.

Wake Forest-Spring-bed Works.—The Raleigh Spring Bed Co. has erected a new factory at Wake Forest, and will at once remove its machinery from Raleigh.

SOUTH CAROLINA.

Abbeville-New Machinery.—The Greenville & Columbia Railroad is adding \$50,000 worth of new machinery to its machine shops.

Abbeville-Cotton Mill.—The cotton-mill project lately noted will be energetically pushed. J. C. Klugh can be addressed for information.

Abbeville-Door and Sash Factory.—J. Allen Smith has organized a company to erect a door, blind and sash factory.

Abbeville-Iron Works Enlarging.—The Tugaloo

Iron Works will be reorganized into a stock company with a capital stock of \$12,000 for the purpose of enlarging the old plant and extending the business. J. C. Klugh can be addressed.

Charleston-Shingle Mill.—N. C. R. and William Dunham and M. Shehan have erected a shingle mill and commenced operations.

Edgefield-Electric Light Plant.—An electric light plant will be built for street and house lighting. R. L. Fox can give information.*

Fork Shoals-Cotton Mill.—Smith & Bramlett have leased the Fork Shoals Cotton Mill from Dr. J. P. Latimer and will put it in operation at once.

Pacolet-New Spindles, etc.—The Pacolet Manufacturing Co. will add to its cotton mill about 2000 new spindles, 216 looms and a slasher. Contract has been let.

Pacolet-Quarry.—A Mr. Johnson, from Pittsburg, Pa., has purchased J. M. Lee's rock quarry near Pacolet, and will work same.

Port Royal-Woodenware Factory.—The National Manufacturing & Improvement Co., capital stock \$5000, has been incorporated for the purpose of manufacturing woodenware and netware. J. D. Dunlap and E. P. Searly are incorporators.

Port Royal-Manufacturing.—E. P. Searcy, G. W. Goodwin and J. D. Dunlap (secretary) have incorporated the National Manufacturing & Supply Co.

West (not a postoffice)-Mercantile.—A charter has been granted at Columbia to the Edwards-Shirley Mercantile Co. with J. W. Shirley and L. A. Edwards as incorporators. The capital stock is \$8000.

Yorkville-Oil Mill.—The erection of a cottonseed-oil mill is talked of. Nothing further is known.

TENNESSEE.

Dayton-Iron Furnace.—The Dayton Coal & Iron Co. blew in one of its furnaces on the 26th ult. after a temporary shut down.

Memphis-Lighting Plant.—Barron Collier & Co. have purchased and will operate the Sun Vapor Street Lighting Co.'s plant.

Murfreesboro-Distillery.—W. R. Ladd will erect a distillery at Big Springs, near Murfreesboro.

Nashville-Iron Furnaces, etc.—The reorganization of the old Southern Iron Co. into the Central Iron Co., noted in the MANUFACTURERS' RECORD last month, has now been effected, and the company's furnaces and other properties will be operated. Robt. Ewing is president of the new concern, and J. A. Cooper, secretary and treasurer.

Overton County-Oil Wells.—W. A. Broughton, of Madison, Ga., and W. W. Wisdom, of Granville, Ga., intend to sink wells for oil in Overton county, where they control valuable lands.

Pulaski-Ice Plant.—The Pulaski Ice Co. is overhauling and improving its plant.

Pulaski-New Machinery.—The Pulaski Water Works Co. will put in a new pump, and contract has been awarded.

Tullahoma-Canning Factory.—G. R. Crane may build a canning factory.*

TEXAS.

Bastrop-Light and Water.—The Bastrop Water & Light Co. has filed its charter. R. Q. Elmer, T. A. Hasler and Louis Ellers are the incorporators; capital stock \$40,000.

Corsicana-Water Supply.—Over \$27,000 has been subscribed by the citizens to a fund to be used in sinking three artesian wells for water supply. The mayor can doubtless give information.

Dallas-Ice Plant.—It is stated that the Lemp Brewing Co. will erect a \$100,000 ice plant of 250 tons daily capacity.

Denison-Flour Mill.—A Mr. Marshall, of Whitesboro, Texas, is said to contemplate building a flour mill in Denison.

Hillsboro-Brass and Iron Works.—The plant noted several weeks ago as being constructed will operate as the Vulcan Iron Works; H. P. Collins and George J. Jordan, owners. All the machinery needed has been purchased, and the concern will do all kinds of iron work and molding, both iron and brass.

Houston.—Charter has been granted to the Evergreen Cemetery Association with T. U. Lobbock, S. L. Sam and Henry Frensd as incorporators; capital stock \$50,000.

Houston-Enlarging.—E. K. Dillingham will enlarge his galvanized iron and copper works, and considerable new machinery has already been purchased and put in.

Lampasas-Electric-light Plant.—J. L. Donovan has purchased the Lampasas electric light plant and will rebuild it on a new site.

Marlin-Manufacturing.—F. J. Morena has organized the Southern Specialty Co. and started a factory.

San Antonio-Electric-light Plant.—The city has

let contract to the Great Western Manufacturing Co. for the erection of an electric-light plant, exclusive of outside work, at \$38,575.

Texarkana-Saw Mill.—The Martin Lumber Co. is putting in a new saw mill on the Tyler Southern Railroad. All machinery has been purchased.

Velasco-Ferry.—The Velasco Ferry Co., capital stock \$1000, has filed its charter. L. E. Deger, G. W. Angle and J. M. Ferguson are the incorporators.

Velasco-Ferry.—The Surf Side Ferry Co. of Velasco has been chartered to operate a ferry between Surf Side and Quintana; incorporators same as of Velasco Ferry Co.

Weatherford-Water Works.—W. E. DeLong has removed his Morrilton (Ark.) water-works plant to Weatherford.

VIRGINIA.

Buena Vista-Machine Works.—The A. K. Rarig Co. will at once arrange to put in operation the Rarig plant, noted last week.

Farmville-Water Works.—The construction of water works is talked of.

Hampton-Water.—The State legislature has passed a bill to incorporate the Hampton Artesian Water Co.

Neapolis (P. O. and former name North Danville) Water Works.—The city will issue bonds for the construction of a water-works system this year. The inhabitants number 5000. For particulars address the mayor.

Pulaski City-Zinc Furnace.—Thomas Jones will erect a zinc furnace.

Richmond-Cigarette Factory.—The United States Tobacco Co. has been chartered by W. D. Jenkins and others. Its purpose is to manufacture cigarettes on a large scale.

Richmond-Sewers.—The city will issue \$70,000 of bonds for the construction of sewers. Address the mayor.

Richmond-Canning Plant.—A charter has been granted to the Broad Rock Fruit & Canning Co. with a capital stock of \$25,000. Conrad Schmidt, of Philadelphia, Pa., is president; O. D. Howard, of Richmond, vice-president, and John A. Kratz, secretary and treasurer.

Richmond-Power, etc.—A bill incorporating the Virginia Power & Milling Co. has passed the State senate.

Richmond-Mining, etc.—The State senate has passed a bill incorporating the Virginia Transit Co. and authorized it to engage in mining, manufacturing and storage.

Richmond-Water, etc.—A bill incorporating the Virginia Water & Sewerage Purification Co. has passed the State senate.

Richmond-Real Estate, etc.—A bill incorporating the Richmond Real Estate & Trust Co. has passed the legislature.

Richmond-Mining, etc.—The State senate has passed a bill incorporating the Kentucky, Virginia, Tennessee & Carolina Mining & Developing Co.

Richmond-Gas-purifying Plant.—The city has awarded contract to the Talbott Sons Co. at about \$26,000 for the erection of a gas-purifying plant.

Richmond-Mining, etc.—Bills to incorporate the Virginia Rotary Steam Engine Co. and the New York Mining Co. have passed the State senate.

Roanoke-Steam Laundry.—W. H. Newsom has purchased the Dixie Steam Laundry at public auction.

Shenandoah-Water Works.—A company already organized intends to build a system of water works and will issue bonds in payment of same. The city is to guarantee the bonds. For further particulars address C. J. Stevens.

Suffolk-Lumber Mills.—The Gay Manufacturing Co. has put its mills in operation and is now cutting 75,000 to 100,000 feet of lumber daily.

Winchester-Water Supply.—The city will expend \$30,000 for additional water supply, this sum having been donated by C. B. Rouss, of New York city. Address T. N. Lepton, mayor.

WEST VIRGINIA.

Bancroft-Coal-mining.—A charter has been granted to the Bancroft Coal Co., with a subscribed capital stock of \$100,000. The incorporators are J. B. Bancroft, of Bancroft; J. L. McLean, of Winfield; Geo. S. Couch and J. N. Nash, of Charleston, and Geo. H. Bond, of Springfield, Mass.

Charleston-Sewers and Street Improvements.—An ordinance has been introduced in the city council to issue \$30,000 of bonds for improving streets and \$20,000 for extending sewer system. A citizens' three-fifths vote is required. For information address the mayor.

Huntington-Hardware.—B. W. Foster, L. M. Sanford and Charles Russell have incorporated the Foster Hardware Co. with a capital stock of \$50,000.

Huntington-Glass Works.—The Huntington Glass Co. will put its plant in operation by April 1.

Morgantown-Street Improvements.—The city

will macadamize several miles of streets this summer. R. E. Fast, mayor, can be addressed.

Parkersburg-Lumber Company.—The Kreps-Rathbone Lumber Co., already noted as chartered, has for incorporators A. T. Kreps, A. A. Kreps, of Greenville, Pa.; S. M. Cote, of Pittsburg, Pa., and Carrie Rathbone, of Reedy Ripple, W. Va. Principal offices of company, South Parkersburg.

Parsons-Lumber.—A charter has been granted to the Porter Boom & Lumber Co. with a capital stock of \$100,000.

Philippi-Coal Mining.—W. W. Roller, of Washington, D. C.; J. W. Fellon and W. P. Scott, of Philippi; W. W. Baker and R. Leigh Fleming, of Fairmont, have incorporated the Barbour Coal & Coke Co. with a capital stock of \$500,000.

Terra Alta-Woodworking Plant.—H. Kohlhorst will endeavor to organize a company to manufacture furniture, doors, frames, etc.

Terra Alta-Cigar Factory.—The Terra Alta Cigar Co. has been organized to start a cigar factory. John F. Lamb, general manager, can be addressed.

Terra Alta-Electric-light Plant.—Endeavors will be made at once to organize a company for the erection of an electric-light plant. W. H. Glover can be addressed.

Wheeling-Iron Mill.—The Whitaker Iron Co. has awarded contract for the building of its new mill, and it is to be completed within ninety days.

Wheeling-New Machinery.—The Wheeling Corrugating Co. has added machinery for manufacturing eaves, trough hangers and connecting pipes.

Wheeling-Blinds.—A charter has been granted to the Baltimore Blind Co. with a capital stock of \$100,000. The incorporators are Wm. A., D. C., Jr., and D. C. List, of Wheeling; H. N. Hanna and Isaac C. Gettings, of Baltimore, Md.

BURNED.

Charleston, W. Va.—The railroad bridge on the Powellton branch of the Chesapeake & Ohio; loss estimate \$30,000. Address Decatur Axtell, Richmond.

Dublin, Ga.—Hardy Smith's saw mill.

Gulf, N. C.—Boiler destroyed by explosion at J. F. Jordan's saw mill.

Laredo, Texas.—The Remi Hotel; loss \$7000.

Newport, Ark.—Stores of N. B. Wishon and E. Van Ronke; loss \$15,000.

Shreveport, La.—Stores of Lewis, Bailie & Co and Looney, Wagons & Co.; loss estimate \$30,000.

Sutton, W. Va.—The Juergens Hotel; loss estimate \$3000.

BUILDING NOTES.

Baltimore, Md.—Depot.—It is reported that the Northern Central Railway Co. is again considering the idea of erecting a new passenger depot in place of the one at Calvert Station. George C. Wilkins is general agent.

Baltimore, Md.—Dwellings.—W. T. King will erect nine three-story brick dwellings on Chase street; William S. Herpet will build three three-story houses on Eutaw Place; Adam Weitner will build one three-story brick dwelling on Sharp street, and Frank Herbert, one three-story dwelling on Chester street.

Baltimore, Md.—University Addition.—The laboratory of the Maryland University, recently destroyed by fire, is to be rebuilt at once. Address Dr. J. J. Chisholm.

Baltimore, Md.—Warehouse.—It is reported that the Northern Central Railway Co. may build a large freight warehouse at Calvert Station. George C. Wilkins is interested.

Bay St. Louis, Miss.—Storehouse.—August Keller will erect a brick storehouse two stories high and wants plans and bids from contractors.

Brunswick, Ga.—Theatre.—It is reported that contracts have been partly let for a theatre to be built in Brunswick to cost \$30,000.

Camden, Ark.—Church.—A fund is being raised to erect a Methodist church to cost \$20,000. J. W. Brown is among those interested.

Carthage, Texas—Church.—A site has been donated for a Presbyterian church which is to be built. Address Rev. Thomas Ward.

Clarksburg, W. Va.—Combination Building.—It is stated that T. Moore Jackson, Brent Maxwell and others have purchased property on which they will erect a building to contain a hotel, theatre, bank and storerooms.

Columbia, S. C.—Hotel.—The project of building a large hotel for a winter resort is being agitated.

Cordale, Ga.—Business Block.—W. B. Hutchison, it is stated, has purchased a site for a business block and will erect a brick building to cost \$15,000.

Easton, Md.—School.—Contracts have been partially let for the high school to be built at Easton to cost \$15,000. Address the board of trustees.

Hanover C. H., Va.—Church.—Proposals for building the proposed church will be received until March 17 by W. F. Wickham at Richmond.

Holland, Texas—Storehouses.—It is stated that E. D. Taylor, Mrs. T. L. Sanders and Lanford Bros. & Co. will erect brick storehouses.

Houston, Texas—Business Block.—A. Hampe will erect a brick business block 50x100 feet.

Houston, Texas—Office Building.—F. L. Dana, of the Houston Co-operative Building Association, states that the new office building will be six stories high and 100x150 feet in size. It will be built of granite to the first story and the balance pressed brick and stone trimmings, with steel girders and iron columns. Contractors and others may address R. D. Steele, architect, or Mr. Dana.

Jacksonville, Fla.—Depot.—The Jacksonville Terminal Co. has been incorporated to build a union depot to cost \$100,000. H. M. Flagler, H. R. Duval and H. S. Haines are interested.

Knoxville, Tenn.—College.—J. S. McCulloch will give information about the college buildings at Knoxville recently burned which are to be rebuilt at once.

La Porte, Texas—Office Building.—E. M. Brule, architect, is preparing plans for a bank, store and office building to be built of brick and three stories high.

Laurel, Md.—Hotel.—Architect W. B. Wood, of Washington, has prepared plans for the hotel to be built at Laurel. It is to be 60x100 feet and three stories high.

Leesburg, Va.—School.—The Leesburg Academy, recently burned, is to be rebuilt. W. N. Wise will give information.

Longview, Texas—Theatre.—E. S. Terry is to build a theatre to accommodate 600 people.

Louisville, Ky.—Bank Improvements.—The Bank of Commerce will put in a new security vault and make other improvements to a building it has recently rented. Address H. M. Burford, president.

Macon, Ga.—Dwelling.—E. Mallory has purchased a site for a dwelling to be built at a cost of \$10,000.

Macon, Ga.—Temple.—Plans have been prepared for the temple to be erected by Macon Masonic lodges.

Madison, W. Va.—Jail.—Bids will be received until March 26 for building Boone county jail, which is to be 48x32 feet and cost about \$10,000. Address D. J. Smoot, clerk.

Montgomery, W. Va.—Hall.—Contracts have been partly let for a hall to cost \$5000 to contain Odd Fellows' lodge and assembly rooms. Address G. M. Vickers, secretary.

New Berne, N. C.—Synagogue.—A site has been purchased on which will be built a Jewish synagogue. F. M. Simmons may be addressed.

New Orleans, La.—Bank Improvement.—The Teutonia Savings Bank will put in a security vault and make other improvements to a building it has recently purchased. Address Henry Weilmann, president.

Petersburg, Va.—Church.—Contracts have been partly let for erecting St. Joseph's Catholic Church, which is to cost \$35,000. It will be built of brick and granite with steel ceiling and hardwood finish. It will seat 1000 people and have three altars. Address George M. James.

Reidsville, N. C.—Bank.—The Bank of Reidsville has purchased a site on which to erect a new building. Address A. J. Boyd, president.

Richmond, Va.—Y. M. C. A. Building.—Funds are being raised to erect a building for the colored Young Men's Christian Association to cost \$30,000.

Richmond, Va.—Dwellings.—A. S. Buford will erect five dwelling-houses, it is reported, on property secured for that purpose.

San Antonio, Texas—Courthouse Alteration.—It has been decided to place an iron and steel roof on the new courthouse to cost \$16,000. Address Dugan & Kroeger, contractors.

Savannah, Ga.—Warehouses.—It is stated that M. Ferst's Sons & Co. and the Savannah Grocery Co. will rebuild the warehouses recently destroyed by fire at once.

Snow Hill, Md.—Storehouses.—J. J. Collins has purchased sites for three brick storehouses which he will build.

St. Bernard, La.—Church.—Funds are being raised to erect a Catholic church.

Uvalde, Texas—Jail.—A new jail will be erected, but not until 1895. It is to cost \$15,000.

Van Buren, Ark.—Hotel.—A company has been organized with \$30,000 capital to build a hotel. F. G. Kerr is president.

Waco, Texas—Cotton Palace.—Architects, decorators, manufacturers and others wanting information about the Cotton Palace should address all communications to J. W. Riggins, Waco, Texas.

Washington, D. C.—Business Block.—Isaac Levy & Son will erect a building for business and residence purposes of brick and stone to be three stories high. J. G. Meyers is architect.

Washington, D. C.—Dwellings.—A block of five three-story dwellings is to be erected on Q street by H. Bradley Davis at a cost of \$25,000. G. W. Cooper is architect.

Wheeling, W. Va.—Theatre.—The concert hall or summer theatre to be built at Washington Park will cost \$12,000 and seat 2000 people. It will be 90x120 feet in size. Address F. Riester.

Woodlawn, Ala.—Storehouse.—J. T. Hood will rebuild his burned storehouse. It will be of brick and two stories high.

RAILROAD CONSTRUCTION.

Railroads.

Baltimore, Md.—It is reported that a company is being formed with \$1,000,000 capital to build an electric road to Washington, traversing Montgomery, Howard and Baltimore counties. Samuel E. George and Alexander Brown are reported to be among those interested.

Brazoria, Texas.—A committee of citizens is negotiating with the International Great Northern Company to extend its line to Brazoria. A fund of \$20,000 has been raised for a bonus, and a depot site in Brazoria donated. The distance is six miles and includes a bridge to cost \$24,000. Address F. I. Duff.

Fort Smith, Ark.—A charter has been granted at Guthrie, Oklahoma, to the Colorado, Oklahoma & Southern Railroad Co., which proposes to build a line from Fort Smith to Trinidad, Col., through Oklahoma Territory.

Fredericksburg, Va.—L. G. Johnson, of Marganna, Va., states that a Northern capitalist may advance funds to build the electric line from Culpeper to Fredericksburg. Among those interested are Jones and John Rixey, of Culpeper; St. George Fitzhugh and George Shephard, of Fredericksburg.

Gainesville, Fla.—J. O. Andrews, of Gainesville, and others are interested in a scheme to build a railroad from Lake Butler to Micanopy via La Crosse and Gainesville.

Gainesville, Fla.—Jas. M. Graham states that he will begin building the road projected by the Gainesville Phosphate & Mining Co. at once. It is now owned by the Alachua Phosphate Co.

Henrietta, Texas.—The Red River & Southwestern Railroad Co., which has planned the line projected through Clay and adjacent counties to the Southern Pacific and Mexican National systems, has asked permission to issue bonds to begin construction work. W. A. Squires, at Henrietta, is interested.

Lumberton, N. C.—Surveys are to be made for a line to extend from Lumberton to a point on the Cape Fear & Yadkin Valley road. Alfred Rowland and T. A. McNeill are among those interested.

Macon, Ga.—It is reported that arrangements are being made to extend the Macon, Dublin & Savannah road from Dublin to Savannah, a distance of 105 miles. D. B. Dunn, at Macon, is chief engineer.

New Iberia, La.—New Orleans capitalists are said to be interested in a scheme to build a road from a point on Bayou Teche near New Iberia to a connection with the Southern Pacific.

Palestine, Texas.—George W. Burkitt, the promoter of the Dallas-Palestine railway scheme, states that the road will be built this year. No contracts have been let as yet.

Parsons, W. Va.—H. C. Shaffer & Co., who are interested in the West Virginia Blue Line road, state that it is intended to extend from Rowlesburg, on the Baltimore & Ohio, to Parsons, on the West Virginia Central, thence along Shaffer's fork of the Cheat river to connect with the Chesapeake & Ohio. Surveys have been made from Rowlesburg to Parsons, thirty-four miles.

Richmond, Va.—The bill incorporating the Richmond & Manassas Railroad Co. has become a law. It is stated that the road will connect with the Baltimore & Ohio at Manassas, and that, with the Powhatan & Farmville and a link fifty miles long to be built from Petersburg to Ridgeway, N. C., a through route will be formed with the Seaboard Air Line.

Richmond, Va.—The bill to incorporate the Bedford & James River Railroad Co. has passed the senate; also bills incorporating the Saltville & Mendatta Railroad Co. and the Spottsylvania Central Co.

Richmond, Va.—A bill has been passed by the house of delegates to incorporate the River Front Railway Co.

Richmond, Va.—The act incorporating the Virginia Electric Railway Co. has become a law.

Savannah, Ga.—Contractor Dobson has begun work on the Savannah & Atlantic road, and it is expected to complete the work by May 1.

Savannah, Ga.—Bondholders of the Savannah, Americus & Montgomery have decided to extend the road from Lyons, Ga., to Savannah, sixty miles distant. T. Edward Hambleton, at Baltimore, is one of the receivers.

Topeka, Kans.—It is stated that the project of the Interstate road from Dakota to the Gulf of Mexico have let the contract for grading 20 miles of line from Galveston Bay north to C. J. Jones. Address F. J. Close, Topeka.

Washington, D. C.—The projectors of the electric

vated electric railway propose to use the Brott "bicycle" system, which has but one rail underneath the car. G. F. Brott, president, may be addressed.

Street Railways.

Columbia, S. C.—The Columbia Electric Railway Co. will extend its line into the southern suburbs. W. R. Wister is president of the company.

Jacksonville, Fla.—It is reported that the Jacksonville Street Railway is to be rebuilt for electric motor use at once, and that several extensions will be made to it.

Kansas City, Mo.—A company is being formed to build an electric road in the southern suburbs of the city to terminate at Seventy-Fifth street. The road will be double track and laid with 73-pound steel rails. George Law and W. E. Winger are interested.

Knoxville, Tenn.—An electric railroad six miles long is projected from Knoxville to Beverly, in the suburbs. Wilson & Co., of Knoxville, are among those interested.

TELEPHONE LINE.

Fort Smith, Ark.—The Southwestern Telegraph & Telephone Co. will build a telephone line 167 miles long between Little Rock and Fort Smith. Charles J. Gilden, at Lowell, Mass., is secretary of the company.

MACHINERY WANTED

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Acid Plant.—See "guano works."

Barrel Machinery.—The Church Cart Carriage Co., Meridian, Miss., wants to correspond with parties having or manufacturing loose-barrel machinery.

Boiler.—Lybrook & Clark, Stuart, Va., will buy a boiler.

Boiler.—The Durham Water Works Co., Durham, N. C., wants bids on a 100 horse-power stationary boiler delivered.

Boiler and Engine.—See "phosphate plant" below.

Boiler and Engine.—Steam power plant for electric-light works will be wanted at Edgefield, S. C. Address R. L. Fox.

Bottling Machinery.—The McComb Ice Factory & Bottling Works, McComb City, Miss., wants bottling machine (cylinders and generator).

Buffing Machine.—The Standard Scale & Supply Co., Limited, Pittsburgh, Pa., wants a buffing machine.

Canning Machinery.—Pate & Willis, Hawkinsville, Ga., want to buy outfit of machinery for canning factory.

Canning Machinery.—W. H. Mobley, Cochran, Ga., wants estimates on outfit of machinery for canning.

Canning Machinery.—Lybrook & Clark, Stewart, Va., will purchase outfit for canning factory of 200 to 300 cans daily capacity, including fruit evaporator.

Canning Machinery.—Yoder & Slusser, New Castle, Va., will purchase canning machinery.

Canning Machinery.—Ferris & Edwards, Ozark, Ala., are in the market for canning machinery.

Canning Plant.—G. R. Crane, Tullahoma, Tenn., wants bids on canning plant of 4000 cans daily capacity.

Castings.—Thomas Jones, Pulaski City, Va., will need some castings.

Cotton Compress.—W. H. Mobley, Cochran, Ga., wants estimates on a cotton compress.

Cotton-mill Machinery.—The Chewalla Cotton Mills, Eufaula, Ala., wants to purchase complete equipment for cotton mill. C. P. Roberts, secretary.

Cranes.—The Hay Foundry and Iron Works, 9 Alling street, Newark, N. J., wants three electric-power cranes of fifteen tons capacity, about fifty feet long.

Crusher.—Thomas Jones, Pulaski City, Va., will need a second-hand "Blake" crusher of medium size.

Crushers.—The city of Morgantown, W. Va., wants to purchase rock crushers. Address R. E. Paul, mayor.

Edger.—A. J. M. Leod & Co., Dillon, S. C., wants to purchase an edger.

Electric-light Plant.—The city of Demopolis, Ala., invites proposals for electric-light franchise. Address the mayor.

Electric-light Plant.—The Shelbyville Water & Light Co., Shelbyville, Ky., expects to be ready about May 15 to contract for machinery for electric-light plant.

Electric-light Plant.—Complete equipment for electric-light plant of 500 lights, sixteen candle-power, will be wanted at Edgefield, S. C. Address R. L. Fox.

Electric-light Plant.—W. H. Mobley, Cochran, Ga., wants estimates on an electric-light plant to furnish 300 sixteen candle-power incandescent lights and seventy-five twenty-five candle-power lights.

Elevators.—The Van Buren Hotel Co., Van Buren, Ark., will want elevators for hotel. Address R. P. Allen, secretary.

Evaporators.—Geo. T. Farnell, Bayboro, N. C., wants to correspond with manufacturers of potato evaporators.

Feather Renovator.—J. H. Bowling, Hopkinsville, Ky., wants to purchase an equipment for renovating feathers.

Gas Engine.—O. 138, Sun office, Baltimore, Md., wants a ten to fifteen horse-power gas engine.

Gasoline Engine.—The Greenville Machine Co., Greenville, Miss., wants to buy a second-hand eight horse-power gasoline engine in good order, and must be guaranteed.

Guano Works.—Frank Roberts, Valdosta, Ga., wants estimates on equipments for guano works and acid plant.

Handle Machinery.—The G. H. Ober Co., Chagrin Falls, Ohio, wants circulars and prices of machinery for making plow handles and D shovel handles.

Heating Apparatus.—The Van Buren Hotel Co., Van Buren, Ark., will want estimates on hot-water heating apparatus. Address R. P. Allen, secretary.

Lathe.—The Hay Foundry and Iron Works, 9 Alling street, Newark, N. J., wants a double-end lathe, 30-inch swing.

Lathe, Punch, etc.—The Standard Scale & Supply Co., Limited, Pittsburgh, Pa., wants a power lathe of 10-inch swing, five-foot bed, punching machine for iron one-half inch thick, five-eighth inch hole, and shear to cut steel 1x1½ inches.

Locomotive.—S. H. Bolinger & Co., Texarkana, Texas, are in the market for a logging locomotive.

Locomotive.—P. J. Peacher, Ocala House, Ocala, Fla., wants a light locomotive.

Match Machinery.—Young & Gettingby, Memphis, Tenn., want a machine for manufacturing splints for matches.

Mining Machinery.—The Black Mountain Gold Mining Co., El Paso, Texas, writes that it expects to buy machinery in due time.

Oil Mill.—W. H. Mobley, Cochran, Ga., wants estimates on a cottonseed-oil mill.

Oil Plant.—Frank Roberts, Valdosta, Ga., wants prices on oil-seed plants.

Overall Machinery.—B. C. Moomaw, Buena Vista, Va., wants information concerning the manufacture of overalls, cost of machinery, etc.

Phosphate Plant.—The Alachua Phosphate Co., Gainesville, Fla., wants a complete phosphate plant, including double log-washer, engine, boiler, etc. Address Jas. M. Graham, general manager.

Pipe.—The Petersburg Iron Works Co., Petersburg, Va., wants galvanized iron spiral-twist and plain pipe for exhaust fans, blowing engines, etc.

Planer.—The Standard Scale & Supply Co., Limited, Pittsburgh, Pa., wants a pony wood planer.

Quarrying Machinery.—The Georgia Slate Co., Rockmart, Ga., will need all necessary machinery for equipping and operating quarry and mill.

Rails.—The Alachua Phosphate Co., Gainesville, Fla., wants 45-pound steel rails (second-hand). Address Jas. M. Graham, general manager.

Rails.—S. H. Bolinger & Co., Texarkana, Texas, are in the market for two to three miles of light steel rails.

Rails.—P. J. Peacher, Ocala House, Ocala, Fla., wants four and a-half miles of 20-pound steel rails.

Roofing.—The A. K. Rarig Co., Buena Vista, Va., will need 800 squares of roofing.

Saw Mill.—R. O. Clark, East Berlin, Conn., wants a new or second-hand portable saw mill complete, thirty to thirty-five horse-power.

Saw Mill.—Stapp & Cooper, Blandville Ky., are in the market for a saw-mill outfit.

Slicing Machinery.—Geo. T. Farnell, Bayboro, N. C., wants to correspond with manufacturers of machinery for slicing or shredding potatoes.

Surfacer.—Young & Gettingby, Memphis, Tenn., want a double surfacer.

Telephone Equipment.—The Laurel Coal Co., Pittsburgh, Ky., wants complete equipment for a telephone line one mile in length.

Telephone Equipment.—W. N. McAnge & Co., Suffolk, Va., want prices on complete outfit (except poles) for telephone exchange of twenty-five subscribers.

Tools.—George Badart, Belton, Texas, wants a "Boynnton" alligator adjustable wrench.

Water Works.—The city of Demopolis, Ala., invites proposals for water-works franchise. Address the mayor.

Water-works Machinery.—The Shelbyville Water & Light Co., Shelbyville, Ky., expects to be ready about May 15 to contract for water-works machinery.

Well-drilling Machinery.—W. H. Mobley, Cochran, Ga., wants to correspond with manufacturers of artesian well-drilling outfits.

Woodworking Machinery.—J. W. Lankford, Chilhowie, Va., noted last week as to buy woodworking machinery, does not want any at present.

Woodworking Machinery.—M. L. Smith, Clover, S. C., wants estimates on cost of small plant for manufacturing bobbins, shuttles, spools and similar articles.

Woodworking Machinery.—The Southern Manufacturing Co., Gadsden, Ala., wants to buy machinery for making well buckets.

J. Edgar Ijams, 1709 North Charles street, Baltimore, Md., wants to communicate with manufacturers with a view to arranging for the manufacture and handling of a patented specialty for hardware and builders' use.

Hancock & Harrison, of Albany, Ky., want to correspond with wheel manufacturers relative to selling spokes in carload lots.

TRADE NOTES.

The Elwood Shafting and Tube Works, of Elwood, Pa., is running on double time, with more orders than it can well handle.

The Gleason & Bailey Manufacturing Co., of Seneca Falls, N. Y., has contract to build a large and improved fire patrol wagon for Mobile, Ala.

The Stillwell-Bierce & Smith-Vaile Co., of Dayton, Ohio, will supply the water works at Pulaski, Tenn., with an 800-gallon-per-minute pump.

The Boomer & Boschert Press Co., of Syracuse, N. Y., has supplied the Golden Belt Manufacturing Co., of Durham, N. C., with one of its baling presses.

Messrs. SYDNOR & SHEPARD, of Richmond, Va., well-drillers, water-supply contractors, etc., are sinking an artesian well at Charlottesville for the Virginia Ice Co.

The Salem (Va.) Mineral Wool Co. is finding a Northern market for its products, and among its recent orders is one of several carloads for a Philadelphia concern.

The yacht building for Mr. Laidlaw, of Glasgow, Scotland, is to have a No. 000 bronze yacht-crank capstan made by the American Ship Windlass Co., of Providence, R. I.

The Lombard Iron Works & Supply Co., of Augusta, Ga., wants purchasers, before buying, to obtain prices from it on mill machinery and supplies. See advertisement.

Messrs. W. H. Gibbs, Jr., & Co., of Columbia, S. C., invite correspondence with mills and factories about to purchase steam plants, supplies for same, etc. See advertisement.

BEFORE you buy machinery of any kind write for prices to the Lombard Iron Works & Supply Co., of Augusta, Ga. Outfits for cotton, saw, oil and fertilizer mills furnished complete.

The Mecklenburg Iron Works, of Charlotte, N. C., are manufacturers and dealers in cotton-mill machinery and general supplies for mills and factories of all kinds. See card in this issue.

The Milner & Kettig Co., of Birmingham, Ala., dealers in machinery, manufacturers' and plumbers' supplies, wrought-iron pipe and fittings, will mail catalogues and price-lists on application.

THOMPKINSVILLE, N. Y., will soon be supplied with additional fire protection. The Gleason & Bailey Manufacturing Co., of Seneca Falls, N. Y., is building a new steel truck for this department.

The Charlotte (N. C.) Supply Co., general textile-mill furnisher, is still giving special attention to furnishing new mills complete, and a full line of supplies is always on hand. See advertisements in this issue.

The two large schooners building by H. M. Bean, at Camden, Me., will have their complete outfits of boilers, engines, windlasses, pumps, piping, etc., from the American Ship Windlass Co., of Providence, R. I.

The Boomer & Boschert Press Co., of Syracuse, N. Y., has an order for a large baling press from the Columbia Mills Co., Columbia, S. C., and have ready to ship one for Rock Hill Cotton Factory Co., Rock Hill, S. C.

ATTENTION is called to the advertisement of W. H. Gibbs, Jr., & Co., of Columbia, S. C., in this issue of the MANUFACTURERS' RECORD. Parties about to purchase machinery of any kind should correspond with them.

ATTENTION is invited to the card of W. B. Smith Whaley & Co., of Columbia, S. C., in this issue. They are engineers and architects, making a specialty of cotton-mill engineering, and will be pleased to correspond with parties interested.

An excellent opportunity for an investment by an experienced woodworker is offered by L. E. Welch in our advertisement pages. He has for sale a bucket and tub factory well equipped with nearly new machinery and situated in good timber district.

The firm of Endicott & Macomber, of Boston, Mass., was dissolved on the 30th ult., and the position of manager and attorney for the Employers' Liability Assurance Corporation, Limited, of London, England, will be carried on by George Munroe Endicott.

Mr. H. S. CHADWICK, of the Charlotte Machine Co., Charlotte, N. C., has been appointed by the Foster Machine Co., of Westfield, Mass., its agent in the Southern States for the sale of cone winders and other textile machinery manufactured by the latter concern.

Messrs. RALSTON & Co., of 302 Walnut Place, Philadelphia, Pa., have recently closed contracts for three closed electric cars for the Middletown-Goshen Traction Co., of Middletown, N. Y., and for six open cars, three motors and three trailers for the Brigantine Transit Co., of Brigantine, N. J.

The Lodge & Shipley Machine Tool Co., of Cincinnati, Ohio, has recently received with other orders several orders for its celebrated motor gear lathe; also triple facing machine and engine crank disc turning and boring machine. This company makes a specialty of machines to rapidly produce machines heretofore done in lathes.

Messrs. TALBOTT & SONS, of Richmond, Va., manufacturers of engines, boilers, mill machinery, etc., have received contract from the city of Richmond for the erection complete of the additional gas-purifying plant. The firm received this award at \$26,847.74 in competition with five leading companies, although its bid was the highest.

Messrs. C. W. TANNER & Co., of Richmond, Va., are dealers in liquid kalsomine and paints for the prevention of fire. All the terminal buildings of the Chesapeake & Ohio Railway at Newport News have been fire-proofed, inside and out, with this firm's material, and many large factories in the South have also used it. See advertisement.

The Powhatan Clay Manufacturing Co., of Clayville, Va., has issued the following notice: "Clayville has been made a regular freight and passenger station. A postoffice has been established, and the Southern Express Co. and Western Union Telegraph Co. have opened offices there. All communications and shipments formerly marked 'Dorset' should now be marked 'Clayville.'"

The National Water Tube Boiler Co., of New Brunswick, N. J., has received contract from the city of St. Louis for supplying 1800 horse-power of boilers for the city's pumping station. The National Company's bid was nearly 20 per cent. lower than the lowest of its competitors, and it expects to make up the reduction by earning large premiums to be received for certain specified efficiencies.

The Lodge & Davis Machine Tool Co., of Cincinnati, Ohio, U. S. A., has received an order from the Societe Anonyme Cockerill, Seraing, Belgium, for several of its machine tools. This concern employs 9000 men, and is to Belgium what Krupp is to Germany. They are large contractors and builders of heavy ordnance guns, locomotives, etc., for the Belgian government. The above order is a direct outcome of the Lodge & Davis exhibit at the World's Fair, the agent of the Cockerill Company having spent several months at Chicago inspecting the various makes of machine tools.

The "Chesapeake" stitched canvas belting manufactured by the Chesapeake Belting Co., Baltimore, Md., is claimed to be thoroughly water-proof and unsurpassed for strength and durability, and unaffected by heat, steam, dampness, gas or fumes from acids in fertilizer factories. It is said to hug the pulleys, and drives the belt so that there is no loss of power. It will not freeze or get hard during extreme cold weather, but always remains soft and pliable. The company is in receipt of many letters attesting the merit of its belting. Samples will be sent free to anyone desiring them.

In our last issue we stated that the F. D. Cummer & Son Co., of Cleveland, Ohio, had sold one of its largest brick machines to Montague & Co., of Chattanooga, Tenn. The statement as to brick machine was incorrect; it should have been one of the Cummer Company's No. 1 size clay driers, together with clay-handling and preparing process. This drier will dry at least fifteen tons of clay per hour, clay carrying on an average of about 20 per cent. of moisture. By adopting this drier and apparatus Montague & Co. will, it is

claimed, reduce their fuel bill very much, at least triple their output of dried clay and be able to cut at least eight men from their pay-roll.

MESSRS. WALSH & WEIDNER, of Chattanooga, Tenn., plate and sheet-iron workers, have made a shipment of two filter cases for the New York Filter Co. and to Long Branch Water Co., Long Branch, N. J. These filter cases were built by Walsh & Weidner, in all ten of them. They are eight feet in diameter by twenty-four feet long, and each one weighs about 16,000 pounds. Walsh & Weidner think they can compete with Eastern manufacturers in their own market on these goods, owing to the amount of room they have at their shops and their facilities for handling such heavy work, and they are prepared to handle this class of work and meet competition on it. They have eight more of these filters at the works yet to be shipped, and they do not think that the workmanship and cost could be improved at the time they were built. Correspondence will be given careful attention.

FRED T. MEYERS MANUFACTURING CO., recently of Covington, Ky., has since February 1 been installed in its new factory built during the past year at Hamilton, Ohio. These buildings cover, it is said, four and a-half acres of ground, and the company alludes to it as the largest in the country for the manufacture of this class of goods. There are two lines of railroads running directly into the works. The company has about finished a large storeroom in which to accommodate finished stock. It will be remembered that this concern was burned out March 4, 1893, and since that time has been building the plant just occupied. As an inducement to come there the town, we are advised, donated the ground on which to erect the buildings. The company is now in a position to execute any orders in its line. Its Eastern headquarters are at 69 Beekman street, New York, F. J. Mattison, agent.

THE Southern Slashene and Size Works, which were established at Charlotte, N. C., in the fall, have had a phenomenal success in the sale of slashene, the increase in its sale having been unprecedented in its history, and the company believes in the history of any mill supply. According to the company's claims, slashene is unequalled for strengthening the warp, for giving elasticity in the weaving, for increasing the production and giving a good appearance to the cloth. Messrs. Eastwood & Co., of Fall River, Mass., who are the proprietors of the Charlotte works, have had over twenty years' experience in mixing and manipulating ingredients for sizing all kinds of cotton goods, and their long connection with this business insures the mills using their goods the best material for sizing its product, the latter operation being said to be the most important factor in manufacturing. The Southern Slashene and Size Works issues circulars giving full particulars of its goods and will forward same on application.

THE LARGEST VALVES EVER MADE.—A valve of unusual size was shipped today by the Ludlow Valve Manufacturing Co. to Pittsburg, Pa. The valve is for a 50 inch pipe, and is tested to withstand a pressure of 500 pounds to the square inch. It is said to be the largest valve of that pressure ever made, and the heaviest straightway valve ever made, weighing about seventeen tons. Six other valves of the same size are being made at the works, and all are to be used for the new Pittsburg water system, and the total contract for valves amounts to about \$30,000. Each of the 50 inch valves requires about six weeks' time to make, and the other six are in various stages of manufacture. The same company is also making a 50 inch check valve for Pittsburg. This will be even larger, weighing in the neighborhood of twenty three tons. The valve will be tested to the same pressure, and will be the largest valve of its kind ever made. The Ludlow Company shipped to Cuba about six months ago the largest globe valve ever made, and now claims to hold the records for large valves of all kinds.—From the Troy (N. Y.) Times, February 28.

THE Gates Iron Works, of 50 South Clinton street, Chicago, Ill., manufacturers of the famous gyratory rock and ore breaker known as the "Gates Crusher," have recently purchased the entire plant, consisting of all buildings, tools, machinery, stock, patterns, drawings, etc., of the Chicago Iron Works, which has an established reputation in the United States, Canada, Mexico and in the South American republics for the high-grade mining machinery manufactured. With this valuable addition to their plant, the Gates Iron Works are in a better position than ever before to build any kind of machinery required for the reduction and treatment of ores of whatever nature, which fact, coupled with their half century of experience in this line of manufactures, enables them to warrant to their customers entire satisfaction, and to furnish them modern machinery of the highest merit both as regards material and workmanship, fully guaranteed to do the work required of it, at prices unequalled in the market for the same class and grade of goods. A trial order placed with them will corroborate the foregoing statement. Anyone contemplating the purchase of machinery

for mining or milling purposes will find it of great personal interest, both financially and otherwise, to communicate their wants to Gates Iron Works at the above address, or to anyone of their following branch offices: 237 Franklin Street, Boston, Mass.; 136 Liberty street, New York city, and 73a Queen Victoria street, London, England.

TRADE LITERATURE.

THE MANUFACTURERS' RECORD is in receipt of an 1894 calendar from John B. McCormick, inventor of the McCormick Holyoke turbine wheel. A large card, which is attached to the calendar proper, presents in a fine illustration an allegory for the careful study of owners and users of water power.

THE MANUFACTURERS' RECORD is in receipt of the "History of a Lead Pencil," published by the Joseph Dixon Crucible Co., of Jersey City, N. J. This is certainly a most interesting pamphlet. The history of the lead pencil as made at the Dixon works is presented by Mr. Walton Day from the digging of the graphite and from the cutting down of the cedar tree to the finished pencil, and some interesting facts about pencils not generally known are gleaned from a perusal of this little book. A portrait of Joseph Dixon, the founder of the company, is presented, with other illustrations.

THE Builders' Iron Foundry, of Providence, R. I., has issued part 2 of its pamphlet "Our Share in Coast Defense." The rather brief description of the 12 inch breech-loading rifled mortars given in the company's first pamphlet is supplemented in the second by reprinting extracts from government specifications and inspectors' reports, as it is thought that more complete descriptions, exact particulars and minute details will interest mechanical engineers and others who follow advanced foundry and machine-shop practice. This No. 2 pamphlet is finely printed and contains a number of drawings and illustrations.

A Winter Vacation in Florida.

On February 27 and March 13 and 27 the Pennsylvania Railroad Co. will run personally conducted tours to Florida. The special trains in charge of experienced tourist agent and chaperon will leave New York 9.30, Trenton 11.08 A. M., Philadelphia 12.10, Wilmington 12.50 and Baltimore 2.36 P. M. These trains will be composed of the finest Pullman sleeping and dining cars, fitted with modern appointments and conveniences of the most sumptuous type. Fifty dollars from New York, \$48.00 from Philadelphia and Baltimore, and proportionally low from other points on the system will cover all expenses while on the special trains—transportation, Pullman accommodations and meals, with the exception of the last tour, the ticket for which covers Pullman facilities southbound only, the limit, however, being May 31, thus allowing a much longer visit. A stay of two weeks in the glorious health-inspiring peninsula may be enjoyed on the first three, and that time may well be spent in following out the numberless side trips available from Jacksonville. These tours are especially apropos during the penitential season now upon us, and a vacation in this beautiful State should prove of great benefit to those more or less fatigued from the pleasures of the social life and excitement of the winter.

To all Depositors
Under the Plan and Agreement for
the Reorganization of the
RICHMOND AND WEST POINT
TERMINAL RAILWAY AND WARE-
HOUSE COMPANY, AND
ITS SUBORDINATE COMPANIES,
Including the
RICHMOND AND DANVILLE RAIL-
ROAD COMPANY AND SYSTEM,
EAST TENNESSEE, VIRGINIA AND
GEORGIA RAILWAY COMPANY
AND SYSTEM,
Dated May 1st, 1893,
With the Modifications Heretofore
Adopted.

The plan of reorganization, as above, has been changed and modified.

A copy of the plan in its present form (dated February 20, 1894), has been filed with the Depositors, Messrs. Drexel, Morgan & Co., 23 Wall Street, New York.

All depositors are invited to obtain copies of this modified plan which will be furnished on application.

Holders of reorganization receipts or certificates for the following securities are notified to

present the same at the office of Messrs. Drexel, Morgan & Co., in order that there may be noted thereon their assent to the plan, as now changed and modified, so far as they are affected thereby, viz:

RICHMOND AND WEST POINT TERMINAL RAILWAY AND WAREHOUSE COMPANY 6 per cent. bonds.
RICHMOND AND DANVILLE RAILROAD COMPANY Consolidated 5 per cent. bonds.
NORTHWESTERN NORTH CAROLINA RAILROAD COMPANY First Mortgage 6 per cent. bonds.
CLARKSVILLE AND NORTH CAROLINA RAILROAD COMPANY First Mortgage 6 per cent. bonds.
OXFORD AND CLARKSVILLE RAILROAD COMPANY First Mortgage 6 per cent. bonds.
CHARLOTTE, COLUMBIA AND AUGUSTA RAILROAD COMPANY Consolidated Mortgage 6 per cent. bonds.
EAST TENNESSEE, VIRGINIA AND GEORGIA RAILWAY COMPANY Improvement and Equipment Mortgage 5 per cent. bonds.
EAST TENNESSEE, VIRGINIA AND GEORGIA RAILWAY COMPANY First Extension Mortgage 5 per cent. bonds.
EAST TENNESSEE, VIRGINIA AND GEORGIA RAILWAY COMPANY General Mortgage 5 per cent. bonds.

Failure to present any such receipts or certificates for such purposes will entitle the Committee to exercise its right of excluding from the plan the respective securities represented by the receipts or certificates not presented.

Holders of the following securities, not heretofore called for deposit, are notified to deposit same under the terms of the agreement dated May 1st, 1894, and the plan as now changed and modified, viz:

RICHMOND AND DANVILLE RAILROAD COMPANY Debenture 6 per cent. bonds.
RICHMOND AND DANVILLE RECEIVERS' Certificates for so-called Emergency Loan.
Coupons for eighteen months from CHARLOTTE, COLUMBIA AND AUGUSTA RAILROAD COMPANY Second Mortgage bonds.

Call of Assessment.

Pursuant to the provisions of said agreement, dated May 1, 1893, and the plan as modified, dated February 20, 1894, a further payment of \$1.88 per share on Common stock of the Richmond and West Point Terminal Railway and Warehouse Company;
\$1.95 per share on Common stock of the East Tennessee, Virginia and Georgia Railway Company;
\$1.50 per share on Second Preferred stock of the East Tennessee, Virginia and Georgia Railway Company;
\$0.75 per share on First Preferred stock of the East Tennessee, Virginia and Georgia Railway Company.

on account of the assessment as modified under said plan, is hereby called for, and is payable at the office of Drexel, Morgan & Co., 23 Wall Street, New York, on or before March 20, 1894.

All holders of reorganization certificates or receipts for such stock are notified to pay the amount due under the call on or before the date mentioned, and their certificates or receipts must be presented so that such payment may be endorsed thereon.

Limit of Time

for depositing

NORTHWESTERN NORTH CAROLINA RAILROAD COMPANY First Mortgage bonds.
CLARKSVILLE AND NORTH CAROLINA RAILROAD COMPANY First Mortgage bonds.
OXFORD AND CLARKSVILLE RAILROAD COMPANY First Mortgage bonds.
DANVILLE AND WESTERN RAILROAD COMPANY First Mortgage bonds.

Pursuant to the provisions of said agreement and plan, as modified, the Committee therein named has limited to March 20th, 1894, at 3 o'clock P. M., the time of the acceptance of said agreement by holders of the four classes of bonds last above mentioned.

Under the provisions of said agreement and plan, outstanding bonds of these four issues must, therefore, be deposited at the office of Drexel, Morgan & Co., 23 Wall Street, New York, not later than March 20th, 1894, at 3 o'clock P. M. Deposits after that date, if accepted, will be received only upon such terms as the Committee shall deem fit.

Georgia Pacific Railway Company First Mortgage bonds.
Columbia and Greenville Railroad Company First Mortgage bonds.
Louisville Southern Railroad Company First Mortgage bonds.

Upon presentation of Reorganization Receipts for bonds of the three issues above described, for suitable endorsement, at the office of Messrs. Drexel, Morgan & Co., we are prepared to advance, in cash, on account of the deposited securities of these three issues, pending reorganization, the sum of

\$25 on each \$1,000 First Mortgage bond of Georgia Pacific Railway Company stated therein;
\$25 on each \$1,000 First Mortgage bond of Columbia and Greenville Railroad Company stated therein;
\$17.50 on each \$1,000 First Mortgage bond of Louisville Southern Railroad Company stated therein;
\$8.75 on each \$500 First Mortgage bond of Louisville Southern Railroad Company stated therein.

In case of non-reorganization, the above advances to be repaid to the Committee, unless they shall, prior thereto, be reimbursed from collection of the coupons due January 1, 1894, from the above bonds.

The advances heretofore made by the Committee on bonds of the foregoing issues deposited under the plan have not been reimbursed to the Committee, and therefore continue as a lien on the deposited bonds.

G. H. COSTER,
GEORGE SHERMAN,
ANTHONY J. THOMAS, } Committee.

NEW YORK, February 20th, 1894.

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When You Visit New England

Ask for tickets via the safe and reliable Norwich Line at all the principal ticket offices in Philadelphia, Washington, Baltimore, Harrisburg and all points South and West. Passengers for Boston and the East can procure tickets by the Norwich Line and thus avoid the inconvenience of carriage transfer in New York, as steamers leave the pier adjoining Pennsylvania Railroad ferry, foot Desbrosses street.

READ HOUSE, Chattanooga, Tenn., is one of the most favorably-known hotels in the South; attested by its register record; second to none in the number of names enrolled therein daily. Its situation immediately in front of the Union Depot and at the same time in the centre of the business portion of the city, makes it at all times the commandant of the patronage of the tourist as well as commercial man, who have made it headquarters in Chattanooga for years. We bespeak for the Read continued popularity.

J. W. MIDDENDORF. Members Baltimore Stock Exchange. W. M. OLIVER.

MIDDENDORF, OLIVER & CO.
BANKERS AND BROKERS,
 No. 213 E. German Street, [KEYES BUILDING.] Baltimore, Md.
 Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other investment loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

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We Buy Total Issues of
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 38 Wall Street,
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Investment Securities,
 Industrial Properties,
 Commercial Paper,
 Railway and Industrial Plant
 Equipment.

Correspondence with Individuals, Corporations and municipalities solicited.

JOHN L. WILLIAMS & SON
BANKERS,
 RICHMOND, VA.
 Our Manual of Investments for 1900, the largest work of the kind published by any banking house in America, (406 pages, octavo, cloth,) may be had without charge by clients, correspondents and those expecting to do business with us; by others at 25 per copy.

MERCANTILE TRUST & DEPOSIT CO.
 OF BALTIMORE.

AUTHORIZED CAPITAL, \$2,000,000
 PAID-UP CAPITAL, \$1,000,000
 SURPLUS and undivided Profits, \$600,000

Legal Depository for Money.
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 Guardian, Trustee of Estates, etc.
 BURGLAR-PROOF SAFES and BOXES.
 Rent—\$10 to \$500. Also Vaults for Storage.

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Exchange Banking & Trust Co.
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Will up Capital, \$100,000. Authorized Capital, \$1,000,000.
 TRANSACTIONS A GENERAL BANKING AND TRUST BUSINESS. INTEREST ALLOWED ON DEPOSITS.

Investments made in safe and reliable interest paying Southern securities, and 1st mortgages on improved real estate in cities.

Correspondence solicited as to all Southern investments. Being within easy reach of all parts of the South, thorough and careful investigation for investors can be made of all investments.
 Officers: Geo. B. Edwards, president; P. N. McKim, cashier; R. E. Muckenfuss, secretary and treasurer; J. Lamb Perry, solicitor; Smythe & Lam, general counsel.

DIRECTORS:
 A. S. J. PERRY, of Johnston, Crews & Co., wholesale dry goods.
 WILLIAM M. BIRD, of Wm. M. Bird & Co., wholesale paints and oils.
 JAMES ALLAN, of James Allan & Co., jewelers.
 E. F. KENNEDY, with Knapp, Frericks & Co., cotton exporters.
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BANKERS AND BROKERS,
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RAILROAD STOCKS AND BONDS,
 GRAIN AND PROVISIONS,
 Cotton and all securities that are dealt in on New York, Chicago, Philadelphia or Boston Exchanges bought and sold for cash or carried on margin on loans made on same. Market letter on application. (Established 1878.)

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 Southern Municipal, Railroad and Industrial Securities.
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L. L. HOTCHKISS,
EXPERT NEGOTIATOR.

Special Negotiation for Capitalists, Corporations and owners of Timber, Mining, Farming, Home, Business and Manufacturing Properties State, County, City and Township Bonds, and Commercial Paper. CHARLOTTE, N. C.

PROPOSALS.

STAND PIPE.—Sealed Proposals will be received by the city of Newnan, Ga. until 12 M Tuesday, March 27, 1894, for erecting Stand Pipe 20x120 feet. Bids asked on both steel and iron. Apply for specifications.
 I. N. ORE, Mayor.
 N. WILSON DAVIS, Engineer.

UNITED STATES ENGINEER OFFICE.
 WILMINGTON, N. C., Feb. 10, 1894.
 SEALED PROPOSALS for dredging at Shad Island Bend, Roanoke River, N. C., will be received at this office until 11 A. M., Saturday, March 10, 1894, and then publicly opened. Specifications, blank forms, and all available information will be furnished on application to this office.—W. S. STANTON, Major Corps of Engineers, U. S. A.

UNITED STATES ENGINEER OFFICE.
 WILMINGTON, N. C., Feb. 10, 1894.
 SEALED PROPOSALS for dredging in the Inland Waterway between Beaufort Harbor and New River, North Carolina, will be received at this office until 11 A. M. Saturday, March 10, 1894, and then publicly opened. Specifications, blank forms, and all available information will be furnished on application to this office. W. S. STANTON, Major Corps of Engineers, U. S. A.

PROPOSALS FOR FURNISHING STAMPED ENVELOPES AND NEWSPAPER WRAPPERS.

POSTOFFICE DEPARTMENT,
 WASHINGTON, D. C., Feb. 28, 1894.
 SEALED PROPOSALS are invited and will be received at this Department until 12 M. on Wednesday, 28th of March, 1894, for furnishing stamped envelopes and newspaper wrappers in such quantities as may be called for by the Department during a period of four years, beginning on the first day of October, 1894. Proposals must be made on the blank forms provided by the Department, securely enveloped and sealed, indorsed "Proposals for furnishing stamped envelopes and newspaper wrappers," and addressed to the Third Assistant Postmaster General, Washington, D. C. Bids delivered in person must be handed in at or before the hour above specified for the receipt thereof; otherwise they will not be considered.
 Blank forms of proposal, with full specifications and samples of the envelopes and wrappers will be furnished upon application to the Third Assistant Postmaster General.

W. S. BISSELL,
 Postmaster General.

SEALED PROPOSALS will be received by the Council Clerk until April 1st, for lighting the City of Paducah, Ky., with 100 Electric Arc Lights for five or ten years.

NOTICE TO CONTRACTORS.

At the Courthouse of Brazoria County, at Brazoria, Texas, on Tuesday, March 27, 1894, up to 12 o'clock M., sealed bids will be received and acted upon by the Commissioners' Court and Citizens' Courthouse Committee for the erection of a New Courthouse, according to plans and specifications on file in the office of the County Clerk of Brazoria County.

Each contractor must accompany his bid with a certified check for \$25.00, conditioned for his entering into acceptable bond and entering into contract should his bid be accepted.
 The contractor whose bid should be accepted must enter into bond for \$25,000 to complete said building according to plans and specifications.
 The County reserves the right to reject any and all bids.

W. S. BITTEL, County Judge.

HELP WANTED.

Advertisements under this head are inserted free of charge for readers of the MANUFACTURERS' RECORD. Advertisements must not exceed five lines—about thirty words—and four insertions will be given without charge.

WANTED.—PLANING MILL FOREMAN, one who can keep the machinery in order and understands grading North Carolina pine for Northern markets. A good worker, sober and reliable. Mill 20,000 feet capacity. State wages and send references. Address JOHN HICKSON & CO., Lynchburg, Va. m39

WANTED.—A Mechanic who understands Mill Work, with some capital, to take an interest in a full equipped Planing Mill in a new and important town on the Texas coast. Address J. G. Slover, Velasco, Texas. m33

WANTED.—MAN OF EXPERIENCE to invest \$5000 and assume management of oil mill. This mill was built and run last season. Address WM. REEVES Prest. Caldwell, Tex. m33

WANTED.—A FIRST-CLASS MAN with \$2000 to take charge of a Manufacturing Plant; running on full time; behind with orders; pays 25 per cent. annually. Address A. J. C., Manufacturers' Record. m33

WANTED.—SUPERINTENDENT for a 50 Ton Cottonseed Oil Mill and small Refinery, in Texas. Married preferred. Permanent contract to right party. Must be a thorough Oil Mill man in every respect; practical, economical, trustworthy, attentive, and know how to handle subordinates. Address, with full particulars, stating salary, Texas, care Manufacturers' Record. m16

A OPPORTUNITY.—A good salary safely guaranteed for a good business man who has \$1,500.00 to invest in an Old Established Newspaper and Job Printing House in one of the best towns in Florida. A splendid opportunity for the right man. Address X. Y. Z. care Manufacturers' Record. m16

WANTED.—Practical Ornamental Iron Worker (American preferred) to take charge of large works in a healthy city in Southwest Virginia; good wages. Address L. S. F., care Manufacturers' Record. m9

SITUATIONS WANTED.

Advertisements under this head are inserted free of charge for readers of the MANUFACTURERS' RECORD. Advertisements must not exceed five lines—about thirty words—and four insertions will be given without charge.

WANTED.—Position as PLATER by a young man who understands Plating, Polishing and Buffing, and who has had fifteen years' experience as foreman of such departments for large manufacturing companies, and can handle men. Address M. E. Conway, 206 Madison ave., Elmira, N. Y. m30

POSITION as FOREMAN in Sash, Door, Blind Factory or Planing Mill; a good Draughtsman; 25 years' experience. Address G. T., care Manufacturers' Record. m23

WANTED.—Position in Planing Mill. Twelve years experience. Can furnish At reference and guarantee satisfaction. Can work in any capacity. Baltimore mills preferred. M. A. J., care Manufacturers' Record. m23

WORKS SUPERINTENDENT is open for re-engagement. Address FREDERICK MYERS, 2623 N 13th Street Philadelphia, Pa. 23

SITUATION WANTED by Experienced Order Clerk and Estimator, Detail Draughtsman and Correspondent in Sash and Door Factory. Understand all branches of the business and am a practical mechanic. Will engage by month or year after April 1st and guarantee satisfaction. Address OFFICE WORK, care Manufacturers' Record. m23

WANTED.—Position as SUPERINTENDENT or assistant of IRON or STEEL MILL; have had twenty years' experience as such. Have built several mills and made drawings for same. Will start at small salary. Will take charge of any part of mill. Address SUPERINTENDENT, care Manufacturers' Record. m23

WANTED.—Situation by young man STENOGRAPHER and TYPEWRITER, willing to do general office work; will start on moderate salary; can furnish best of references. Address Stenographer, care Manufacturers' Record. m23

WANTED.—By a young man, 24 years of age, situation as CHAIRMAN or RODMAN on City or Railroad work; four years' experience; good reference. Address J. L. RICHEY, Oxford, Ala. m23

CIVIL ENGINEER (25) wants position either as LEVELMAN, TRANSITMAN or DRAUGHTSMAN. Thorough experience; excellent references; salary \$75 per month. Address F. J. F., Manufacturers' Record. m16

WANTED.—Situation by a Factory Machinist, 16 years' experience, as HOSIERY, COTTON and WOOL DYER. Temperance man. Address CHAS. CLEWORTH, No. 19-8 East York St., Phila., Pa. m16

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A List of Leading Lumber Dealers and Manufacturers in the South.

This list of representative Southern lumber merchants and manufacturers is published for the benefit of those who desire to reach responsible houses in this branch of business in the South. Readers of the MANUFACTURERS' RECORD who have occasion to correspond with any of the firms mentioned below will confer a favor by mentioning this paper.

YELLOW PINE.
Manufacturers.

Reddie & Simonson, Birmingham, Ala.
Hawkins & Smith, Birmingham, Ala.
Marbury Lumber Co., Bozeman, Ala.
Peters Lumber Co., Brewton, Ala.
Villa Rica Lumber Co., Anniston, Ala.
Stringfellow-Whetstone Co., Anniston, Ala.
W. J. Williams & Son, Eustis, Ala.
S. B. Allen & Co., Montgomery, Ala.
Moore & Kirkland, Montgomery, Ala.
Pansey Lumber Co., Pansey, Ala.
S. A. Blasingame, Verbena, Ala.
Wagar Lumber Co., Wagar, Ala.
Marbury & Jones, Bozeman, Ala.
Dunham Lumber Co., Dunham, Ala.
Gadsden Lumber Co., Gadsden, Ala.
Tuscaloosa Lumber Co., Hull, Ala.
J. H. Johnson, Sugar Creek, Ala.
Long-Bell Lumber Co., Buckner, Ark.
Cotton Belt Mill, Cotton Belt, Ark.
Eagle Lumber Co., Eagle Mills, Ark.
Red River Lumber Co., Lewisville, Ark.
A. J. Neimeyer Lumber Co., Waldo, Ark.
Fordyce Lumber Co., Fordyce, Ark.
S. Anderson & Co., Tucker, Ark.
Fort Smith Lumber Co., Fort Smith, Ark.
North Arkansas Lumber Co., Portia, Ark.
Kansas City & Southern Lumber Co., Sedgewick, Ark.
Simpson & Co., Bagdad, Fla.
Carey & Ollinger, Bagdad, Fla.
Skinner & McDavid, Escambia, Fla.
McMillan Mill Co., Pine Barren, Fla.
Southern States Land & Lumber Co., Muscogee, Fla.
Chipola Lumber Co., Marianna, Fla.
J. S. Betts & Co., Ashburn, Ga.
J. J. Hanosley, Americus, Ga.
Cherokee Lumber Co., Atlanta, Ga.
Perkins Mfg. Co., Augusta, Ga.
Donaldson Lumber Co., Donaldsonville, Ga.
W. A. Smith & Co., Brunswick, Ga.
Bibb Land & Lumber Co., Cox, Ga.
Farrar Lumber Co., Dalton, Ga.
James K. Clark Lumber Co., Gertrude, Ga.
D. M. & W. W. Bush, Godwitsville, Ga.
Bewick Lumber Co., Hazlehurst, Ga.
Dale Dixon & Co., Savannah, Ga.
Julius Levin & Co., Alexandria, La.
Bradley-Ramsey Lumber Co., Lake Charles, La.
Gulf Lumber Co., New Orleans, La.
A. Wilbert's Sons Lumber Co., Plaquemine, La.
Victoria Lumber Co., Victoria, La.
G. H. Thomas, Springfield, La.
Hearn & Co., Robertsville, La.
Keystone Lumber & Imp. Co., Bogue Chitto, Miss.
J. S. Blackburn, Ellisville Depot, Miss.
Asheboro Wood and Iron Works, Asheboro, N. C.
Mellard-Brown Lumber Co., Charleston, S. C.
E. D. Mins, Edgefield, S. C.
Reliance Lumber Co., Beaumont, Texas.
East Texas Lumber Co., Texarkana, Texas.
Southern Pine Lumber Co., Texarkana, Texas.
Lutcher & Moore Lumber Co., Orange, Texas.
D. R. Wingate Lumber Co., Orange, Texas.
P. Josseland & Bro., McDuffies, Texas.
Warren Lumber Co., Warren, Texas.

NORTH CAROLINA PINE.
Manufacturers.

Ryland & Brooks Lumber Co., Baltimore, Md.
Aberdeen Lumber Co., Aberdeen, N. C.
Page Lumber Co., Aberdeen, N. C.
Greenville Land Improvement Co., Greenville, N. C.
John L. Roper Lumber Co., Roper, N. C.
Butters Lumber Co., Hub, N. C.
Jansmond Lumber Co., Montrose Landing, N. C.
J. B. Blades & Bro., New Berne, N. C.
Stimson Lumber Co., New Berne, N. C.
Albamar Lumber Co., Elizabeth, N. C.
Camp Manufacturing Co., Winton, N. C.
Gay Manufacturing Co., Bosley, N. C.
Frank Hitch, Hamilton, N. C.
C. W. Mobley & Co., Berry, N. C.
S. R. Fowle & Son, Washington, N. C.
John Hickson & Co., Lynchburg, Va.
The A. F. Withrow Lumber Co., Clifton Forge, Va.
F. Sitterding, Richmond, Va.
Tunis Lumber Co., Norfolk, Va.
George G. Tyler, Norfolk, Va.
Cummer Co., Norfolk, Va.
H. I. Anderson & Co., Danville, Va.
W. T. Ferguson, Ferguson's Wharf, Va.
Cooper & Spottswood, Jarratts, Va.
D. S. Jones, Newport News, Va.
George E. Bart, Waverly, Va.
Mitchell & Steele, Steelville, Va.
H. M. Owen, Fungo, Va.

CYPRESS.
Manufacturers.

Tallapoosa Lumber Co., Sistrunk, Ala.
T. M. McMillan, Stockton, Ala.
Mohr-Weil Lumber Co., Montgomery, Ala.
Cypress Lumber Co., Sherrill, Ark.
J. P. Little, Sumner, Fla.
Cypress Lumber Co., Apalachicola, Fla.
Wilson Cypress Co., Palatka, Fla.
St. Mark's Lumber Co., Tallahassee, Fla.
Atlanta Cypress Lumber Co., Atlanta, Ga.
Bibb Land & Lumber Co., Cox, Ga.
Altamaha Cypress Lumber Co., Brunswick, Ga.
N. B. Trellue & Co., Patterson, La.
Callahan & Lewis Mfg. Co., Patterson, La.
Julius Levin, Alexandria, La.
H. C. Stringfellow, Howard, La.
Louisiana Cypress Lumber Co., Harvey, La.
Lutcher & Moore Cypress Lumber Co., Lutcher, La.
Iberia Lumber Co., New Iberia, La.
Burton Lumber Co., Berwick, La.
R. F. Learned, Natchez, Miss.
E. G. Goddard Lumber Co., Logtown, Miss.
J. H. Leavenworth, Greenville, Miss.
Wm. Curphey, Vicksburg, Miss.
Hanson & Smith, Wilmington, N. C.
W. H. Richardson, Eagle Rock, N. C.
W. B. Ellis, New Berne, N. C.
W. D. Hickman, Granite, N. C.

CYPRESS SHINGLES.
Manufacturers.

Mobile Shingle & Manufacturing Co., Mobile, Ala.
John S. Mash & Sons, Luverne, Ala.
J. D. Cameron & Son, Mobile, Ala.
Stewart & Butt, Mobile, Ala.
J. H. Johnson, Sugar Creek, Ala.
Highland Land & Lumber Co., Humphrey, Ark.
Niemeyer & Darragh Shingle Co., Little Rock, Ark.
Bohemia Shingle Mill Co., Bohemia, Fla.
Wm. A. McCann, Jacksonville, Fla.
Carrey & Ollinger, Bagdad, Fla.
T. E. Collier, Cordele, Ga.
Altamaha Cypress Lumber Co., Brunswick, Ga.
Cherokee Lumber Co., Atlanta, Ga.
J. L. Maxwell, Cornelia, Ga.
J. S. Owens, Hawkinsville, Ga.
H. H. Tift, Tifton, Ga.
Julius Levin & Co., Alexandria, La.
The J. H. Poe Shingle Co., Lake Charles, La.
B. T. Durham, Leno, La.
Lutcher & Moore Cypress Lumber Co., Lutcher, La.
William Drews, Morgan City, La.
L. Miller Shingle Co., Orange, Texas.
Moore & Swineford, Orange, Texas.
John L. Roper Lumber Co., Norfolk, Va.

HARDWOOD.
Manufacturers.

Scatcherd Lumber Co., Decatur, Ala.
H. C. Higman & Co., Decatur, Ala.
Sample Lumber Co., Hollins, Ala.
J. B. Adams, Longview, Ala.
Lathrop-Hutton Lumber Co., Riverside, Ala.
J. N. Hutchinson, Salem, Ala.
Guthrie Bros., Sulligent, Ala.
Sullivan Timber Co., Wilson, Ala.
Desha Lumber & Planting Co., Arkansas City, Ark.
Cole & Davis, Bay Village, Ark.
G. W. Decker, Black Rock, Ark.
Faist & Co., Bryant, Ark.
Hardwood Mill Co., DeWitt, Ark.
Southern Land & Lumber Co., Dry Run, Ark.
Dickson, Cross & Co., Fairmount, Ark.
C. T. Wheeler, Fulton, Ark.
O'Neill Manufacturing Co., Rome, Ga.
James Chapin & Son, Cloverport, Ky.
W. L. Pence, Frankfort, Ky.
E. A. Smith, Glendale, Ky.
J. W. Boyd & Co., King's Mountain, Ky.
Maston Lumber Co., Livingston, Ky.
Kentucky Saw Mill Co., Louisville, Ky.
Beargrass Lumber Co., Louisville, Ky.
A. H. Rennebaum, Middlesborough, Ky.
B. Crisler, Meridian, Miss.
Ashley & Clement, Hernando, Miss.
C. W. Rich, Richburg, Miss.
J. E. P. Boxley, Robinsonville, Miss.
Hannibal Saw Mill Co., Hannibal, Mo.
John B. Wheeler & Co., Cooter, Mo.
Hunter & Dawson, La Grange, Mo.
D. C. Way Lumber Co., Haslin, N. C.
I. H. Chadborn & Co., Wilmington, N. C.
J. R. Fowle & Son, Washington, N. C.
Leftwich & Platt, St. Joseph, Tenn.
E. H. Thurston, Athens, Tenn.
Moore & McFarren, Memphis, Tenn.
Nashville Lumber Co., Nashville, Tenn.
Cumberland Manufacturing Co., Harriman, Tenn.
James M. Williams, Charlottesville, Va.
Mitchell & Steele, Steelville, Va.
N. L. Johnson, Pennington Gap, Va.
W. M. Ritter, Welch, W. Va.
J. C. Williamson, Warrenton, W. Va.
Nicola Bros., Nicolette, W. Va.
Condon-Lane Boom & Lumber Co., Bretz, W. Va.
James Lumber Co., Charleston, W. Va.

Wholesale HARDWOOD Dealers.

W. H. Treworgy, Boston, Mass.
Smith & Blanchard, Boston, Mass.
James A. Wood, Boston, Mass.
Parker & Page, Boston, Mass.
Weston & Bigelow, Boston, Mass.
Palmer, Parker & Co., Boston, Mass.
Litchfield Bros., Boston, Mass.
E. J. Hammond & Co., Boston, Mass.

W. S. Daniel, Boston; Mass.
John M. Woods & Co., Boston, Mass.
Howard Watson, St. Louis, Mo.
Berthold & Jennings, St. Louis, Mo.
Boyd & Wyman Lumber Co., St. Louis, Mo.
Smith & Little, St. Louis, Mo.
Chas. F. Luehrmann Hardwood Lumber Co., St. Louis, Mo.
Bohn-Verdin Lumber Co., St. Louis, Mo.
Druhe Hardwood Lumber Co., St. Louis, Mo.
Smith & Meier Lumber Co., St. Louis, Mo.
Abeles & Tansig, St. Louis, Mo.
Steele & Hibbard, St. Louis, Mo.
James A. Harnett & Co., St. Louis, Mo.
Wyeth Lumber Co., St. Louis, Mo.

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Wholesale Dealers and Exporters.

Price & Heald, Baltimore, Md.
Jenkins & Cochran, Baltimore, Md.
Alcock & Ellis, Baltimore, Md.
E. M. Lazarus & Co., Baltimore, Md.
Sprigg, Taylor & Co., Baltimore, Md.
W. W. Welch, Baltimore, Md.
Wm. S. Cross, Baltimore, Md.
J. van Hall, Baltimore, Md.
A. I. Lyen, Baltimore, Md.

STAVES AND HEADING.
Manufacturers.

H. C. Stiles & Co., Stiles, Ala.
Decatur Stave Works, Decatur, Ala.
Stave & Hoop Co., Alexander City, Ala.
J. B. Adams, Longview, Ala.
J. H. Hamlen & Son, Little Rock, Ark.
Springfield Lumber & Cooper's Co., Jonesboro, Ark.
Wilson Bros., Piggott, Ark.
Beck & Ellis Bros., Cherry Valley, Ark.
Little Rock Cooperage Co., Little Rock, Ark.
Danforth & McLin, Greenwood, Ark.
P. V. De Land, Black Rock, Ark.
Stetcher Cooperage Works, Jonesboro, Ark.
Jonesboro Stave Co., Jonesboro, Ark.
Tampa Lumber Co., Tampa, Fla.
J. N. Bray, Cecil, Ga.
Kentucky Union Lumber Co., Clay City, Ky.
Dewey Stave Co., New Orleans, La.
George D. Eike, New Orleans, La.
J. H. Bridges & Co., Campbell, Mo.
Hall & Frisbee, Dexter, Mo.
W. H. Miller Stave Works, De Witt, Mo.
F. G. Oxley Stave Co., Poplar Bluff, Mo.
Pioneer Steam Keg Works Co., Brownwood, Mo.
Palmer Mfg. Co., Wilmington, N. C.
McLean & Smith, Martin, Tenn.
Smith & Wood, Dyersburg, Tenn.
Frank Stave & Lumber Co., Frank, Tenn.
Hudson, Ward & Ray, Greenfield, Tenn.
Sherwood Stave Co., Lawrenceburg, Tenn.
Beck & Ellis Bros., Memphis, Tenn.
Sharer & Hall, Oneida, Tenn.
J. F. Howard, Union City, Tenn.
H. Gwin, Green Sulphur Springs, W. Va.
E. O. Felton, Roncove, W. Va.
Gauley River Lumber Co., Gauley River, W. Va.
Schaffer, Brown & Co., Kingwood, W. Va.
Waybright & Heiseman, Kendall, W. Va.
Vinton Alderman, Burning Springs, W. Va.

RAILROAD TIES.

W. M. Molton, Salts, Ala.
Sperry & Shortwell, Sedgewick, Ark.
Garrett Lumber Co., Texarkana, Ark.
James S. Pope, Glenn Dale, Md.
A. B. Hubbard, Chatawa, Miss.
J. M. Allen, Springfield, Miss.

J. W. Woodward, Waynesboro, Miss.
J. P. & W. C. Weatherbee, Westville, Miss.
F. M. Woodsall, Gorin, Mo.
Blackburn, Cox & Co., Hunnewell, Mo.
Ellis Paul, Cedar Gap, Mo.
Reliance Lumber Co., Beaumont, Texas.
R. I. Anderson & Co., Danville, Va.
James G. Harrison, Disputanta, Va.
J. McKinley & Co., Ravenswood, W. Va.
A. C. Tidd, Murfreesville, W. Va.
R. V. Dorsey, Hurricane, W. Va.

SPOKES AND HANDLES.
Manufacturers.

Huntsville Spoke & Handle Co., Huntsville, Ala.
South Calera Mfg. Co., South Calera, Ala.
Hagerstown Spoke & Handle Co., Hagerstown, Md.
Frederick Spoke Factory, Frederick, Md.
Hendersonville Mfg. Co., Hendersonville, N. C.
C. J. Dundas, Statesville, N. C.
Newton Spoke & Lumber Co., Newton, N. C.
Yorkville Spoke & Handle Co., Yorkville, S. C.
Southern Spoke & Rim Co., Memphis, Tenn.
Wells & Lesh, Jackson, Tenn.
Johnson Bros. & Taylor, Brownsville, Tenn.
Gallatin Manufacturing Co., Gallatin, Tenn.
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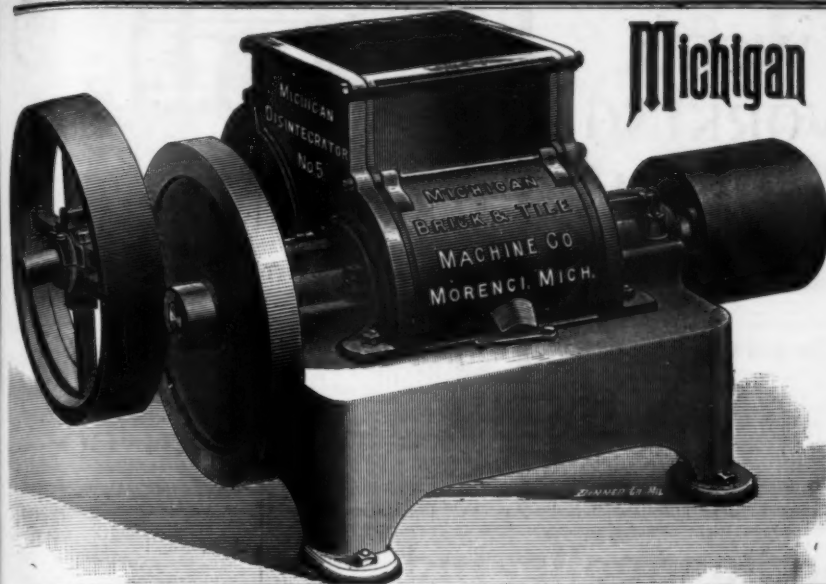
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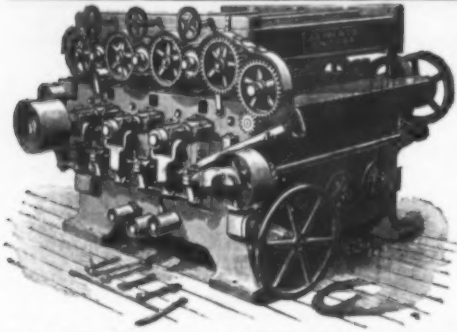
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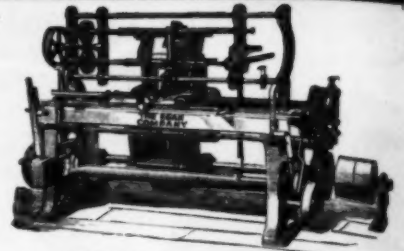
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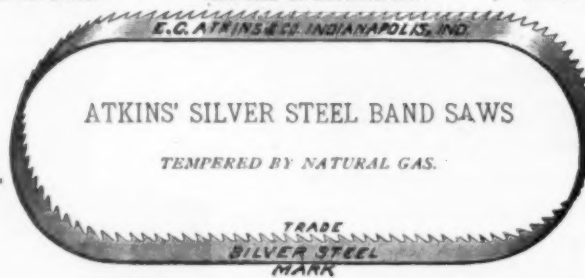


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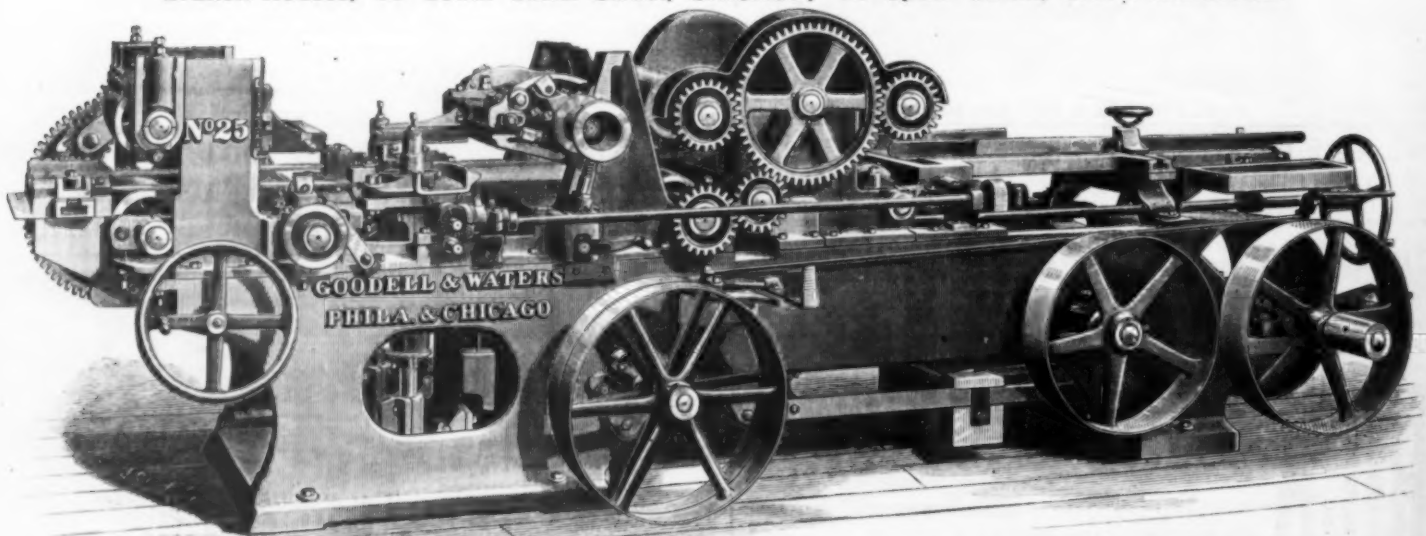
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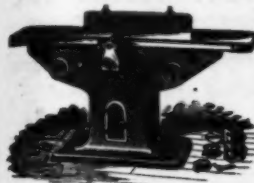
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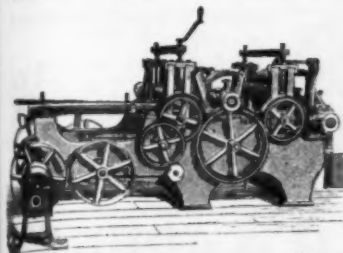
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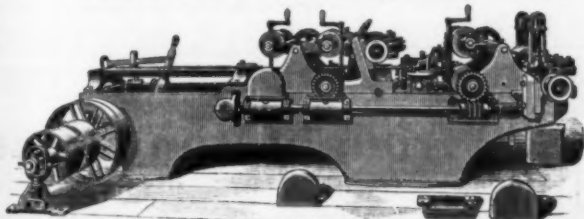
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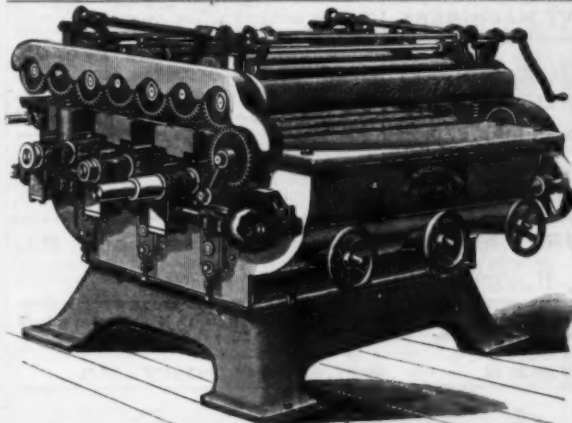
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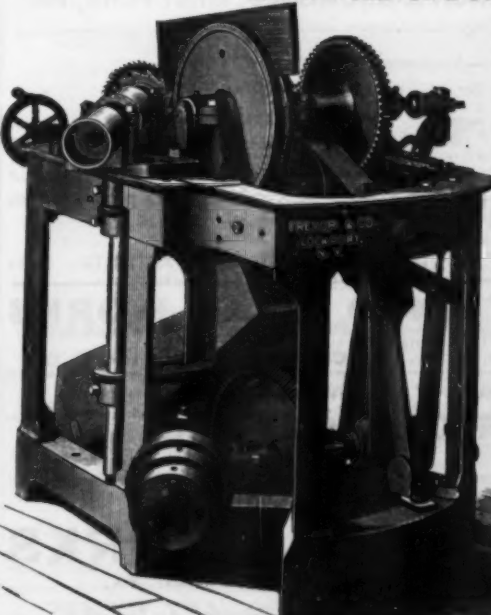
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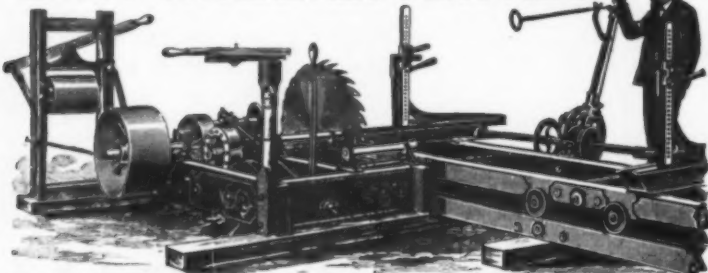
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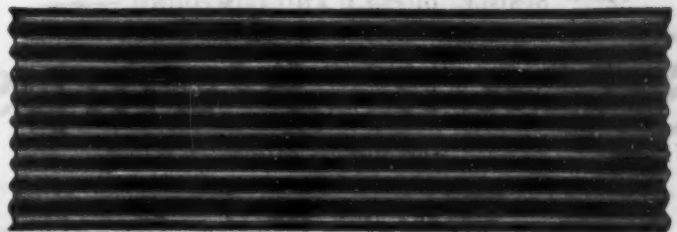
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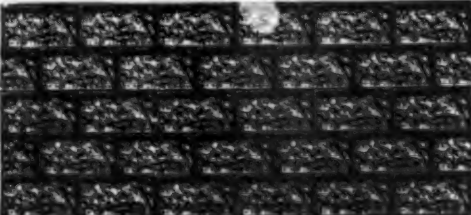
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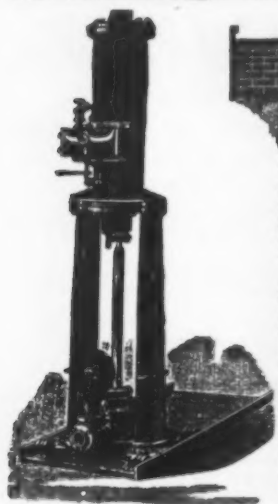
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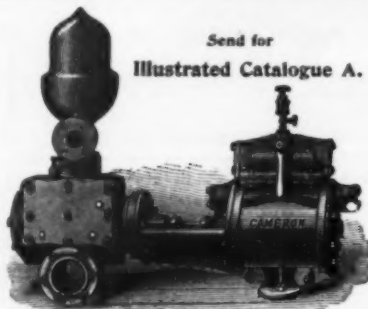


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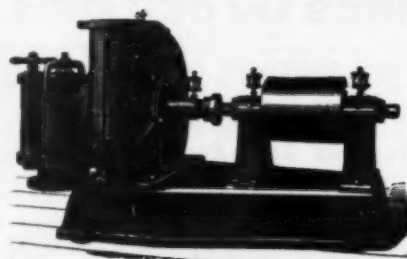
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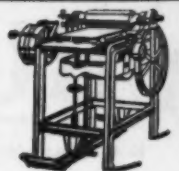
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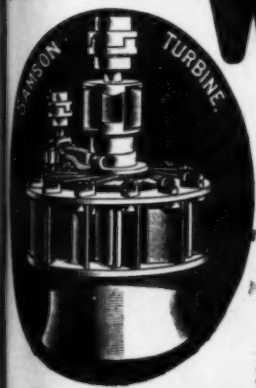
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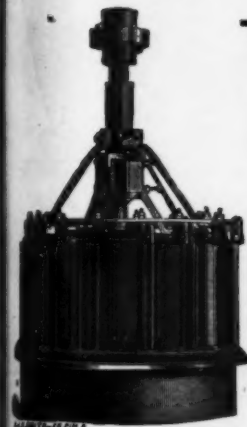
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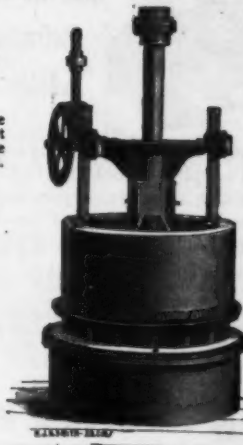
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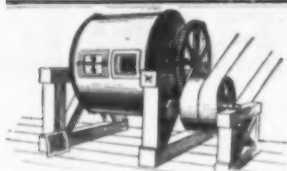
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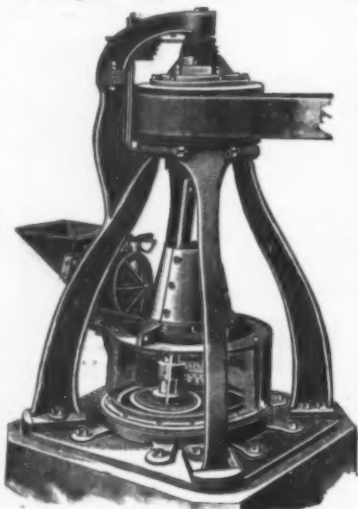
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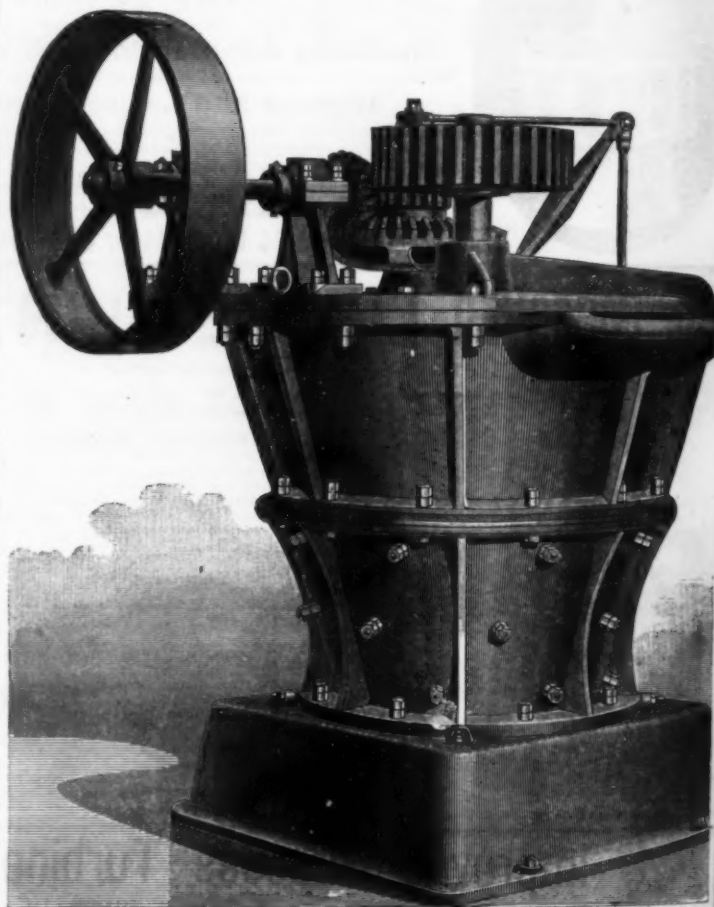
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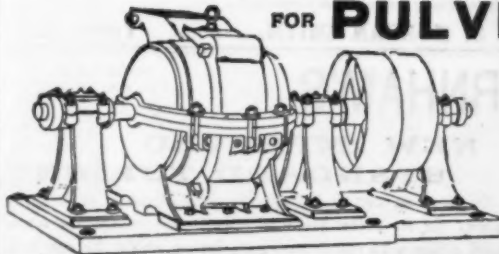
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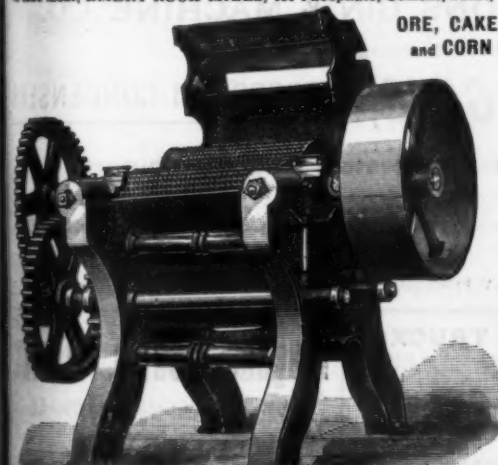
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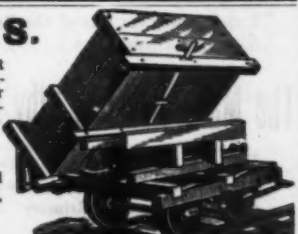
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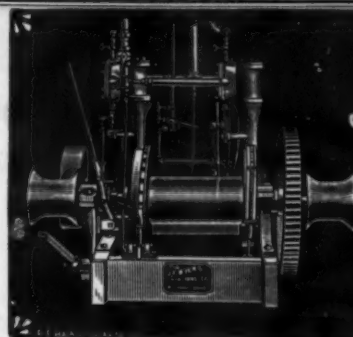
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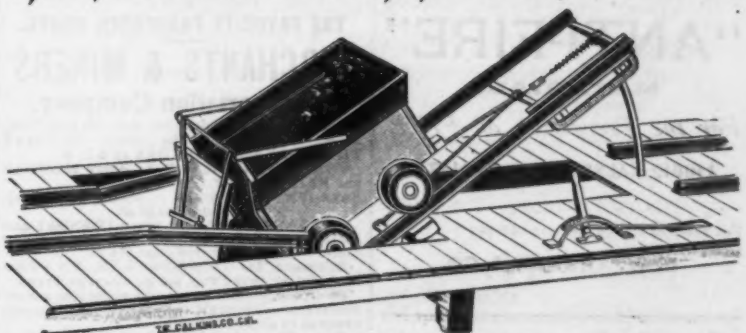
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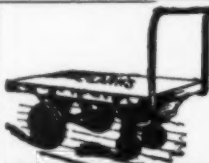
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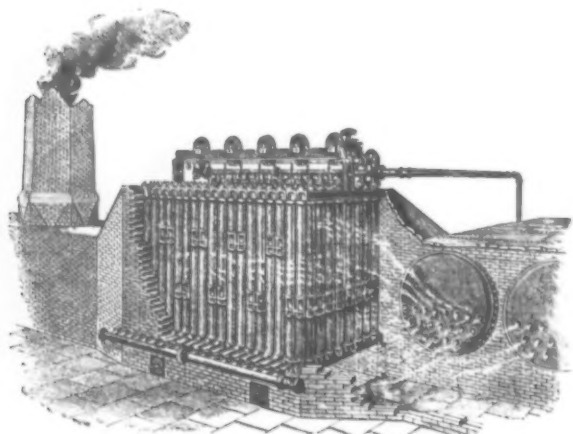
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